



The Pricing of Progress: Economic Indicators and the Capitalization of American Life

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The Pricing of Progress: Economic Indicators and the Capitalization of American Life

A dissertation presented

by

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to

Department of the History of American Civilization

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

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The Pricing of Progress: Economic Indicators and the Capitalization of American Life

Abstract

A history of statistical economic indicators in America, this dissertation uncovers the protracted struggle which took place in the nineteenth century over how economic life should be quantified, how social progress should be valued and how American prosperity should be measured. By revealing the historical origins of contemporary indicators such as Gross Domestic Product, and by uncovering the alternative measures that ended up on the losing side of history, this work denaturalizes the seemingly objective nature of modern economic indicators while offering a fresh take on the rise of American capitalism.

Tracing the contested nature of statistical indicators since the time when Thomas Jefferson and Alexander Hamilton first debated how prosperity should be measured, this dissertation details how quantification techniques developed by profit-minded businessmen eventually came to be used not only to manage a railroad corporation, administer a slave plantation or run a textile factory but also to organize, discipline, manage and make sense of American society as a whole. The micro-managing of wage workers led to macroeconomic indicators, slave plantation accounts led to national productivity statistics, corporate cost-accounting led to cost-of-living indices and the bottom line became the American government's top priority. While these capitalist statistics were being institutionalized as the benchmarks of American progress, previously popular measures which gauged such social issues as propertied independence,

exploitation, poverty, inequality, gender discrimination, social mobility, insanity, education, incarceration and even prostitution mostly fell by the wayside by 1900.

The ramifications of this historical development were enormous as these priced measures of productivity, consumerism, and market growth helped to transform the maximization of capitalist production and consumption into the main objective of American society, all the while turning monetary prices into the standard unit for measuring not only our goods but our planet, our society, our future and ourselves. Distinct from mere commodification, this dissertation refers to this process as the “capitalization” of everyday life because these figures treated American society like one big capitalized investment and its human citizens as human capital.

Table of Contents

List of Figures.....	vi
Acknowledgements	vii
Introduction.....	1
Seeing like a Capitalist: The Hamiltonian Origins of How Capitalists Count	34
Seeing Like a Yeoman: Patriarchal Commercialism in the Early Republic	70
Lots of Growth: <i>Hunt's Merchants' Magazine's</i> Frontier of Human Capital.....	103
An Asylum in Numbers: The Rise of Moral Statistics in Jacksonian America.....	144
Tale of Two Capitalisms: The Rise of Growth Statistics in Antebellum America	196
Capitalization and its Discontents: Labor Statistics in Gilded Age America	250
Epilogue.....	304
Bibliography	318

List of Figures

Figure 1: Samuel Blodget's Financial Money Meter	61
Figure 2: Samuel Blodget's pricing of the American people	63
Figure 3: An engraved portrait of John Adams	93
Figure 4: 1790 census page	96
Figure 5: Jessup Scott's growth chart	128
Figure 6: Percentage of growth by city population	141
Figure 7: Percentage of dividend given by Boston banks.	141
Figure 8: Pauper Statistics	154
Figure 9: Benjamin Rush's Moral and Physical Thermometer	159
Figure 10: Church temperance statistics	160
Figure 11: Shattuck's Wealth Pyramid	179
Figure 12: Canal Toll Statistics	238
Figure 13: Calculating the Railroad Business	244
Figure 14: Aldrich Report	251
Figure 15: The alternative statistics of the Massachusetts Bureau	259
Figure 16: Atkinson's cost of living statistics	287
Figure 17: Massachusetts Bureau's dietary schedule	288
Figure 18: The Aladdin Oven.	292
Figure 19: Incarceration rates of OECD countries	308

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Finally, as the reader of the following pages will soon recognize, this dissertation questions the notion that growth is always an inherent good and that more is always better than less. At the risk of losing all of my intellectual integrity before the acknowledgments are even over, however, I must admit that my lovely Mika and Ella have taught me an important life lesson: Two really is better than one.

To Tali

Introduction

The Pricing of Progress

In the midst of his impassioned sermon in 1832 on the dangers of drinking in upstate New York, moral reformer Theodore Dwight Weld pulled out of his pocket a piece a paper which contained a series of statistics. Reading from his back-of-the-envelope calculations, he declared that of the 300,000 drunks in America, 30,000 would die every year; that of the 200,000 paupers, half had alcohol to blame for their problems; and of the 30,000 committed to insane institutions, half had gone crazy due to drinking. Finally, he noted that "an inventory of all the murders committed in the land for a single year" revealed that "99-100th of them were committed by intoxicated men."¹ Measuring the social effect of alcohol by examining the physical, social or mental wellbeing of the American people, such statistics could be found in almost every intemperance speech or moral reform report in Jacksonian America. Americans often called them "moral statistics."

Just as these moral statistics were taking America by storm, however, the manner in which the social cost of alcohol consumption was being measured was beginning to radically change. Already in 1830, for example, the New York State Temperance Society, which was led not by reformers or clergymen but rather wealthy Albany businessmen, quantified the social damage wrought from drinking not by detailing the fate of the drinkers themselves but rather by pricing the overall cost it would have on the town writ large. "There cannot be a doubt," the society's first report concluded, "that the city suffers a dead yearly loss of three thousand dollars" due to "time spent drinking," "expenses of

¹ Weld's sermon quoted in Robert Abzug, *Cosmos Crumbling: American Reform and the Religious Imagination* (New York: Oxford University Press, 1994), 96.

criminal persecutions,” and “loss to the public by carelessness.” Treating the consumption of alcohol as a tax, these Albany businessmen, who had made much of their fortune by investing in urban real estate, used temperance figures to do what they did best: price and capitalize time and space. “At the present value of money,” they argued, “the tax the city of Albany pays to alcohol would pay the interest on six million of dollars yearly; would build 200 houses each year costing 1500 dollars each; and rent 2000 tenements at 150 dollars rent per year.”²

While there is little doubt that Weld’s moralizing statistics were used to discipline urban journeymen and rural farmers, his statistical focus nevertheless remained squarely on the wellbeing of the drinkers themselves. On the contrary, the Albany businessmen’s temperance statistics ignored individual wellbeing and focused only on the effect - measured in money prices - which certain drinking habits would have on their town’s market productivity. Re-conceptualizing the American people as income generating inputs of cash that could be plugged into growth-maximizing equations, these temperance statistics measured societal progress and wellbeing by gauging the effect certain labor and consumption patterns had on capital accumulation. This social vision treated everyday life like a capitalized investment. As a result, drinking alcohol was bad not because it ruined lives but rather because it ruined economic growth.

Almost two hundred years after Albany businessmen priced the social cost of intemperance in their town, the Center for Disease Control and Prevention released a study in 2011 which calculated that “the cost of excessive alcohol consumption in the United States reached \$223.5 billion...or about \$1.90 per drink.” Echoing the approach of Albany

² New York State Temperance Society, *Circular of the New York State Temperance Society, to the Citizens of the State* (Albany, 1830).

businessmen over a century and a half before, the study argued that 72% of the costs resulted from “workplace productivity,” 11% from “health care expenses,” 9% from “criminal justice expenses” and 6% from “motor vehicle crash costs.”³ Such statistical studies likely ring familiar in the contemporary ear. This is partly due to the fact that, since the 1980s, all major health and environmental regulations implemented by the United States government must, by law, undergo a “cost-benefit analysis.” The bureaucratic need for a balancing test that can determine whether a government project or regulation is worthwhile has led to the pricing of not only alcohol consumption, but just about everything: The average American is willing to pay \$257 to save the bald eagle from extinction, \$208 to save the humpback whale and \$225 to drop 10 pounds. Each IQ point that a child loses due to lead poisoning is worth \$9000. The “recreational value” of Oregon’s Hell Canyon is \$900,000. Obesity costs the American economy \$92.2 billion each year. Surfing the web while at work costs \$63 billion. Finally, a human life today is worth \$9.1 million – up from \$6.3 million under the George W. Bush administration.⁴

The clear resemblances between the 1830 Albany intemperance report and the 2011 CDC cost-benefit analysis are far from coincidental. As I will demonstrate throughout this dissertation, it was precisely these nineteenth century capitalization statistics - and not

³ Centers for Disease Control and Prevention, “Excessive Drinking Costs U.S. \$223.5 Billion,” accessed April 8th 2013, <http://www.cdc.gov/features/alcoholconsumption>.

⁴ In 1981, United States President Ronald Reagan passed executive order 12,291, which mandates cost-benefit analysis for all major environmental and health-and-safety regulations. For the pricing of a human life see W. Kip Viscusi, “The Value of Risks to Life and Health,” *Journal of Economic Literature* 31, no. 4 (1993): 1912-1946; Frank Ackerman and Lisa Heinzerling, “Pricing the priceless: Cost-benefit analysis of environmental protection.” *U. Pa. L. Rev.* 150 (2001): 1553; Richard T. Carson, Nicholas E. Flores, Kerry M. Martin, Jennifer L. Wright, “Contingent Valuation and Revealed Preference Methodologies,” *Land Economics* (1996): 80-99; Peter Bohm and Claude Henry, “Cost Benefit Analysis and Environmental Effects,” *Ambio*, 8 (1979) 18-24; Matthew Herper, “The Hidden Costs of Obesity,” *Forbes*, November 24th, 2006; Weight Control Information Network, “Economic Costs Related to Obesity,” accessed April 8th 2013, <http://win.niddk.nih.gov/statistics> on April 4th 2013; “As U.S. Agencies Put More Value on Life, Businesses Fret,” *New York Times*, February 16th, 2011.

their existing alternatives – which would go on, after intense political struggles and intellectual debates, to become the forefathers of our contemporary economic indicators and the progenitors of how Americans currently measure and value not only social progress but everyday life.

Today, economic indicators shape our everyday lives in countless ways. Lawmakers, politicians, lobbyists and bureaucratic regulators often base economic policy upon the assumption that the main goal of American society, even on such issues as the environmental future of the planet, is to maximize Gross Domestic Product (GDP). A statistic that measures “economic growth” by aggregating the monetary prices of all goods produced and consumed in a certain territorial area, GDP has become the central statistic for measuring economic progress and social wellbeing not only in the United States, but across the globe. Whether used in government cost-benefit analyses as seen above, political arguments, corporate board rooms, World Bank memos, political stump speeches or to separate “developing” nations from “developed” ones, GDP has become the main barometer of our economic lives.⁵

Economic indicators are also our modern kingmakers. Along with statistics which measure unemployment, consumer confidence, cost-of-living, and the Dow Jones Industrial Average, GDP has been known to swing many an election. When asked what was the most important issue in the 2012 presidential election, for instance, the most popular response

⁵ On the contemporary role of GDP in our everyday lives see Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi, *Mismeasuring Our Lives: Why GDP Doesn't Add Up* (New York: New Press, 2010); “The Rise and Fall of G.D.P.” *New York Times*, May 13th 2010; Andrew Yarrow, *Measuring America: How Economic Growth Came to Define American Greatness in the Late Twentieth Century* (Amherst: University of Massachusetts Press, 2011). On the role that economic indicators has played in the construction of developed and developing nations see James Ferguson, *The Anti-Politics Machine: “Development,” Depoliticization, and Bureaucratic Power in Lesotho* (Cambridge: Cambridge University Press, 1990); Arturo Escobar, *Encountering Development: The Making and Unmaking of the Third World* (Princeton: Princeton University Press, 1995).

by a rather wide margin was “the economy in general.”⁶ But what is “the economy?” As many scholars have recognized in the past few years, there is no economy without economic indicators. Appearing to bring the abstractions of modernity to life, it is statistics such as GDP which gave birth to the reified thing we moderns call “the economy” and it is economic indicators which allow us to see if the economy is “sick,” “healthy,” “flourishing,” or “shrinking.”⁷ Statistical measures such as GDP, therefore, have immense social power because for most Americans these indicators serve as the only lens through which they can catch a glimpse of the economic forces that shape their lives. This leads to yet another reason why economic indicators are so powerful: Whatever they choose to measure becomes visible, whatever they don’t remains in the dark. A recent study demonstrated that a majority of Americans “vastly underestimated the levels of inequality” in the United States. This is not surprising when one looks at the economic indicators used by the main media outlets today: Of the 25 listed on the *New York Times* website, for example, not one measures income distribution.⁸

⁶ “Most Important Problem,” Gallup Poll accessed April 8th 2013, <http://www.gallup.com/poll/1675/most-important-problem.aspx>

⁷ An excellent literature on the birth of “the economy” has emerged in recent years. See Timothy Mitchell, “Fixing the Economy,” *Cultural Studies*, 12.1 (1998), 82-101; Adam Tooze, “Imagining National Economies,” in *Imagining Nations*, ed. Geoffrey Cubitt (Manchester: Manchester University Press, 1998), 212-228; U. Kalpagam, “Colonial Governmentality and the ‘Economy,’” *Economy and Society*, 29.3 (2000), 418-438; Daniel Breslau, “Economics Invents the Economy: Mathematics, Statistics, and Models in the Work of Irving Fisher and Wesley Mitchell,” *Theory and Society*, 32.3 (June 2003), 379-411; Alain Desrosières, “Managing the Economy: The State, The Market, and Statistics,” in Theodore Porter and Dorothy Ross, ed., *The Cambridge History of Science*, vol. 7: *Modern Social Sciences* (Cambridge: Cambridge University Press, 2003), 553-564.

⁸ Michael Norton and Dan Ariely, “Building a Better America – One Wealth Quintile at a Time,” *Perspectives of Psychological Science*, 6 (January 2011) 9-12; For the *New York Times* indicators see <http://www.nytimes.com/pages/business/economy/index.html>. The *New York Times* purchases these indicators from Bloomberg L.P. a data company founded by current New York Mayor Michael Bloomberg in 1981 which made \$7.6 billion in 2011.

How and why did certain statistical indicators become the yardsticks for measuring progress and wellbeing in American society? What forgotten alternatives have existed in the past? What role have economic indicators played in the shaping of American life and the rise of American capitalism? A research project on the political, intellectual and cultural history of statistical indicators in America, this dissertation seeks to answer these questions by examining the protracted struggle which took place in the nineteenth century over how economic life should be quantified, how social progress should be valued and how American prosperity should be measured. Despite the clear impact economic indicators have had on modern life, their history has been remarkably understudied. As a result, most Americans today view GDP-based economic growth figures as an a-historical, natural and “common-sense” measure of societal wellbeing. In the nineteenth century, however, the question of which statistics should serve as the yardsticks of American society remained open – and greatly contested. Seemingly cold numbers were the subject of many a heated debate. By revealing the contested political, intellectual and economic origins of statistics such as GDP, and by uncovering the alternative measures that ended up on the losing side of history, my dissertation looks to denaturalize the seemingly objective nature of modern economic indicators while offering a fresh take on the emergence of American capitalism.

Overview of Argument

In his portrayal of the English working class in the eighteenth century, E.P. Thompson depicted how rioting peasants would often times “set the price” of bread in instances where they believed that they were being overcharged. Refusing to pay the merchant, miller or baker what they thought to be exorbitant prices, the angry crowd

would take the loaves of bread by force – but they would not steal them. Instead, they would leave behind what they felt was a fair price. While Thompson stressed that custom played an important role in this “moral economy,” peasants did not use force every time prices rose. Along with notions of economic justice and tradition, there was a second trigger to these riots: Peasants *knew* exactly what the merchant was doing. “The poor had their own sources of information,” Thompson explains. “They worked on the docks. They moved the barges on the canals. They drove the carts and manned the toll-gates. They worked in the granaries and the mills. They often knew the local facts far better than the gentry.”⁹ As Thompson noted, peasants experienced the production chain of bread in their day-to-day lives. They could recognize instances where some link in the chain – be it the merchants, bakers or millers - attempted to grab a larger piece of the pie.

By the 1820s, on the other side of the Atlantic, few Americans were able to peek into the proverbial village granary as the English peasants had done a century before in order to view the economic mechanisms that shaped their lives. As settlers pushed westward in the early nineteenth century and new networks of transportation and trade linked disparate regions together, the world became a much bigger place for most Americans. In an attempt to gain control of this elusively intangible and interdependent environment, people came to rely heavily on statistics which could relay information about activities that occurred outside their local communities. From the early-nineteenth century onwards, an avalanche of statistical indicators, tables and maps became the main lens through which Americans came to understand and subsequently try and take control of their social and economic world. “The economy” was slowly emerging - and statistical indicators were its maker. To

⁹ E.P. Thompson, “The Moral Economy of the English Crowd,” *Past and Present*, 50 (1971), 115.

see the economic pie, future Americans would have to look at a pie chart.¹⁰

Be they government bureaucrats, founding fathers, risk-taking entrepreneurs, labor radicals, southern slaveholders, populist farmers, Wall Street bankers, feminist activists or neoclassical economists, this dissertation uncovers the eclectic mix – and surprisingly star-studded cast – of nineteenth century Americans who created statistical measures in order to gauge the successes and failures of their society. Tracing the contested nature of statistical indicators since the time when Thomas Jefferson and Alexander Hamilton first debated how prosperity should be measured in the early republic, this dissertation explains why certain measures (such as indebtedness, propertied independence, exploitation, poverty, inequality, racial and gender discrimination, social mobility, education, insanity, incarceration and even prostitution) have mostly fallen by the wayside while others (such as labor productivity, market growth, cost of living, the Dow Jones Industrial Average, and consumer spending) were canonized and institutionalized as the benchmarks of American progress by the turn of the twentieth century.

Varied acts of capital investment lie at the heart of this dissertation and should be understood as the main engine which, despite countless resistances and unforeseen contingencies, shaped the making of modern economic indicators above all else. Tracing the flow of American and European capital westward in the nineteenth century, this dissertation follows the money. To borrow an example from the first chapter, it is impossible to understand why Alexander Hamilton sought out data on the market productivity of yeoman households without first examining his attempts, through his

¹⁰ For all the criticism it has accrued in the past decades, I still find Robert Wiebe's idea of "Island Communities" to be a useful way of conceptualizing early America. Robert Wiebe, *The Search for Order, 1877-1920* (New York: Hill and Wang, 1967). For a good overview of the idea of "interdependence" see Thomas Haskell, *The Emergence of Professional Social Science* (Urbana: University of Illinois Press, 1977).

founding of the first banking and industrial corporations in America, to transform the United States into a society where local and foreign investors could safely and profitably invest their capital. To borrow an example from the third chapter, it is impossible to understand why Chicago and St. Louis boosters obsessed over the results of the census in their respective towns without first examining how *Hunt's Merchant's Magazine* helped transform urban population growth into an investment tool that eastern capitalists could use to decide in which cities they should invest in real estate. Finally, to borrow an example from chapter five, it is impossible to understand why South Carolina Governor James Henry Hammond chose to quantify the wonders of Southern society in his famous "Cotton is King" by declaring that "produce per capita... amounts to \$16.66 per head," without first exploring how Hammond forced his slaves to weigh the cotton they had picked every night so that he could whip those who, in his eyes, were not productive enough.¹¹

Let's return to the intemperance example once more, to see how this process often played out. The timing of these new capitalized temperance statistics in the 1830s was no coincidence as the 1820s was a crucial decade for both urban industrialization and real estate investment, especially in towns like Albany where the opening of the Erie Canal had led to an expansion of market relations and an upheaval of the colonial agrarian order.¹² Finding themselves no longer under the same patriarchal roof as their apprentices-turned-wage-workers, and fighting such immigrant cultural phenomena as "Blue Mondays," a

¹¹James Henry Hammond, *Selections from the Letters and Speeches of the Hon. James H. Hammond of South Carolina* (New York, 1866) 315.

¹² Paul E. Johnson, *A Shopkeeper's Millennium: Society and Revivals in Rochester, New York, 1815-1837* (New York: Hill and Wang, 2004); Charles Sellers, *The Market Revolution: Jacksonian America, 1815-1846* (New York: Oxford University Press, 1991); Mary P. Ryan, *Cradle of the Middle Class* (New York: Cambridge University Press, 1981); Herbert Gutman, *Work, Culture and Society in Industrializing America: Essays in American Working-Class and Social History* (Oxford: Basil Blackwell, 1977).

nascent class of urban manufacturers was becoming aware that for every glass of whiskey their wage laborer drank they would likely see a reduced output – and therefore reduced profits. The less men worked and the more they drank also meant the less they had to spend on the types of goods local merchants and urban wholesalers sold. As their intemperance calculations indicated, a reduction in market output and trade was also seen to have a detrimental effect on rent seeking urban real estate developers since there would be less demand for everything from commercial warehouses to dry goods stores. As a result, it was not at all difficult for local businessmen in booming market towns such as Albany to begin envisioning drinking not as a social or moral problem but as a tax on their capital investments.

Businessmen, however, were not the only ones looking to statistics in order to gain a semblance of control and power in a radically changing world. Ever since Karl Marx decried how capitalism drowned society in “the icy water of egotistical calculation,” and Max Weber argued that “one of the fundamental characteristics of an individualistic capitalistic economy is that it is rationalized on the basis of rigorous calculation,” there has been a tendency, especially on the left, to conflate all forms of quantification with alienation, commodification and capitalism.¹³ Throughout this dissertation I try to make the crucial point that there is nothing intrinsically “capitalist” about statistics by tracing how different ideological visions shaped very distinct kinds of statistical indicators. Due to his agrarian republican ideology, for example, Thomas Jefferson believed that population density was

¹³ Karl Marx, Friedrich Engels, *Manifesto of the Communist Party*, Chapter 1, accessed April 8th 2013, www.marxists.org; Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Talcott Parsons (Roxbury: 1998) 76; See also Theodore Adorno and Max Horkheimer, *Dialectic of Enlightenment*, ed. Gunzelin Schmid Noerr, trans. Edmund Jephcott, (Palo Alto: Stanford University Press, 2002) for a similar approach to numeracy.

the most important statistical indicator in America because he dreaded the day when white men would run out of land and be forced into factories, thus losing their republican virtue and patriarchal independence. Due to their obsession with unequal power relations many Jacksonian reformers saw the number of paupers and prostitutes as “moral statistics” which could measure whether the American republican experiment was thriving or not. Finally, due to their demands for gender equality, feminist activists such as the Knights of Labor’s statistician Leona Barry compared women’s wages to men’s while also quantifying the exploitation of female seamstresses. As these examples demonstrate, numbers could be used to politicize and depoliticize economic discourse, privatize or democratize the economy, empower or exploit workers.

Throughout the nineteenth century, the adherents of these very different statistical visions debated in Congress, daily newspapers, church sermons, best-selling books, political pamphlets and even the Federalist Papers over which statistical indicators should be canonized by the American state as the benchmarks upon which economic and social policies were to be evaluated – and whether these codification choices should be determined by political processes or left to the realm of supposedly disinterested experts. Exploring how these contested political, intellectual and cultural battles played out, I argue that while both statistical visions continued to define and shape each other, it was the capitalizing vision that gained the upper hand by the turn of the twentieth century. As my final chapter demonstrates, by the late 1890s it was largely the capitalization statistics of businessmen (and they were almost exclusively men) that were institutionalized by government bureaucracies such as the census and disseminated by daily newspapers, financial magazines and the emerging academic discipline of modern economics.

As a result of this, business quantification techniques often ended up being used not only to manage a railroad corporation, administer a slave plantation or run a textile factory but also to organize, discipline, manage and make sense of American society as a whole. The micro-managing of wage workers led to macroeconomic indicators, slave plantation accounts led to national productivity statistics, cost-accounting figures led to cost-of-living indices, Return on Investment metrics became “economic growth,” and the bottom line became the American government’s top priority. By 1900, these priced measures of productivity, consumerism, and market growth were helping to transform the maximization of capitalist production and consumption into the main objective of American society, all the while turning monetary prices into the standard unit for measuring not only our goods but our planet, our society, our future and ourselves. Distinct from mere commodification, I refer to this social and cultural process as the “capitalization” of everyday life because these figures treated American society like one big capitalized investment.

The institutionalizing of modern capitalization statistics was nothing less than a cultural revolution for these figures helped to reverse the previous relationship between economic activity and social welfare in America. Instead of seeking to measure, as many nineteenth century statistics often did, the effect certain economic or social policies had on the physical, mental or social welfare of the American citizenry, these capitalizing indicators gauged the effect American labor and consumption had on economic growth, capital accumulation and market productivity. Quantifying society as if was a capital investment, these statistics - and the men who wielded them - helped transform economic activity from a means to an end (a better life) into an end in itself (more growth.) While

many nineteenth century measures (such as the Weld's intemperance statistics) were shaped by the ideological contours of Jeffersonian Republicanism, Jacksonian democracy or free labor producerism and therefore placed the individual at the center of society, capitalist statistics played a key role in the pricing of the American citizen into money-generating functionaries of production or consumption that could be fitted into equations that calculated future yields on capital investments. To use an only slightly anachronistic term that emerged soon after the invention of GNP in the 1930s, by the turn of the twentieth century the citizens of the United States were being reimagined by both businessmen and the state not as human beings but as "human capital."¹⁴

Review of Literature

The history of modern economic indicators is a topic historians have yet to explore in-depth. Book indexes, always a useful window into the minds of historians, rarely include statistical indicators as an historical category. And while many scholars have raided past statistics for invaluable data, they have often not treated these figures as historical actors or political constructs in their own right. Products of the capitalist system they seek to analyze, neoclassical economic historians who practice "cliometrics" often view past statistics as ahistorical numbers that can be inserted into predetermined, anachronistic models (usually of GDP growth). Instead of seeking to historicize modern indicators, these

¹⁴ To remain historically accurate, I have written GNP (Gross National Product) here since that was the indicator used before 1950. While very similar to the GDP figures we see today, there are key differences. The *New Palgrave Dictionary of Economics* defines human capital as "the productive capacities of human beings as income producing agents in the economy." Such a definition, I find, perfectly articulates the social vision behind capitalization statistics.

historians play a leading role in naturalizing them by implicitly assuming that their main purpose as scholars is to explain the reasons behind past GDP rates.¹⁵

In the past few decades, however, a rich literature has emerged regarding the epistemological problems inherent in approaching quantification and statistics as “objective” fact. Mary Poovey and other theorists have explored how and why statistics which “embody theoretical assumptions about what should be counted” have nevertheless succeeded in seeming “immune from theory and interpretation.”¹⁶ As this literature on statistics has convincingly shown, every mode of codification is embedded with its creators’ subjective assumptions, biases, theories and values. An in-depth analysis of what different Americans decided to count, and how they chose to count it, can therefore tell us a great deal about how they viewed the world around them and their own place in it. Statistics, in short, can serve as incredibly insightful windows into the minds of past Americans. Unfortunately, however, it appears that this theoretical literature has led many historians to distance themselves from statistics all together, in fear of distorting the past. While disciplines such as political science and law have rushed to implement neoclassical economists’ problematic data-driven methodologies, historians have generally turned away from numbers in the past few decades. One goal of this dissertation is to demonstrate that while social and cultural historians have been right to avoid the quantitative analyses

¹⁵ For an excellent critique of cliometrics see Francesco Boldizzoni, *The Poverty of Clio: Resurrecting Economic History* (Princeton: Princeton University Press, 2011).

¹⁶ Mary Poovey, *A History of the Modern Fact* (Chicago: Chicago University Press, 1998) xi-xv; Ted Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, Princeton University Press: 1995); Alain Desrosieres, *The Politics of Large Numbers: A History of Statistical Reasoning* (Cambridge: Harvard University Press, 2002); Paul Starr, “The Sociology of Statistics,” in Alonso W. and Starr P., eds., *The Politics of Numbers* (Russel Sage Foundation, New York: 1987).

so common in other disciplines, they should not steer away from statistics completely – but rather critically embrace them as rich historical artifacts.¹⁷

Past statistics, however, haven't just reflected America's history - they have helped shape it. In this regard, my theoretical approach to quantification has been most influenced by the writings of Bruno Latour, Ian Hacking and Michele Foucault. The statistics in this book are not treated as symbols but, in the words of Latour, "as social tactics that allow knowledge to stick." My main goal then is not to examine how well these images represented some sort of "reality," but rather to uncover what political, cultural and intellectual power they had.¹⁸ As Ian Hacking and Michele Foucault have illustrated, the consumption of seemingly objective statistics can significantly alter one's views on just about everything as people often come to internalize the underlying assumptions inherent in these figures.¹⁹

To get at the power of statistics, this dissertation often treats statistics as mobile disseminators of certain economic and social worldviews, or "ideology carriers." By first analyzing the ideas and values that shaped the creation of certain economic indicators, and then following the institutional paths these different forms of economic quantification took,

¹⁷ For the role of neoclassical economics in legal thought today see Duncan Kennedy, "Law and Economics from the Perspective of Critical Legal Studies" *The New Palgrave Dictionary of Economics and Law*, ed. Peter Newman (New York: Macmillan, 1998).

¹⁸ Bruno Latour, "Drawing Things Together," in Lynch, M. and Woolgar, S. (eds.), *Representation in Scientific Practice* (Cambridge: MIT Press, 1990) and *We Have Never Been Modern* (Cambridge: Harvard University Press, 1993)

¹⁹ "Governmentality," *The Foucault Effect: Studies in Governmentality*, edited by Graham Burchell, Colin Gordon, and Peter Miller. (Chicago: University of Chicago Press, 1991). Ian Hacking, "Making Up People." in *Reconstructing Individualism: Autonomy, Individuality and the Self in Western Thought*, ed. T. Heller, M. Sosna, and D. Wellbery. (Stanford: Stanford University Press, 1986). For a good example of how historians have implemented these ideas see Sarah Igo, *The Averaged American: Surveys, Citizens and the Making of a Mass Public* (Cambridge: Harvard University Press: 2007).

I uncover the influential role statistics have played in the shaping of American political discourse, economic thought and the social imagination. For example, in my sixth chapter I show how the Senate Finance Committee's Aldrich Report, which was designed to measure the condition of the American people, implemented cost-of-living statistics that had first been invented within New England textile factories. When these statistical indicators were used by the finance committee to gauge American progress, the profit-maximizing logics of the textile factory began to frame political debates as well as the government's decision-making processes. By legitimizing, for instance, the idea of corporate consolidation while also dramatically narrowing the political possibilities that were "on the table" for laborers, I show how these cost-of-living figures ended up having enormous political power.

Despite the overall trend away from statistical analyses, however, a number of excellent books have been written on quantification and economic statistics in the past few decades. My dissertation, however, differs from these books in a number of important ways. Firstly, a majority of these books have tended to focus on questions of objectivity, probability and government bureaucracy rather than capital investment, labor movements, slavery, class conflict or political ideologies. The actors in these narratives, therefore, are usually bureaucrats, academics and scientists – not capitalists, farmers, slave-owners or laborers. The questions these books are usually interested in – the rise of a bureaucratic state, the "taming of chance," the social construction of scientific knowledge – are all fascinating, but differ from the set of historical problems this dissertation has set out to explore.²⁰ In this regard, my dissertation is more interested in exploring the light which

²⁰ Donald Mackenzie, *Statistics in Britain, 1865-1930: The Social Construction of Scientific Knowledge* (Edinburgh: University of Edinburgh Press, 1981); Ian Hacking, *The Taming of Chance* (Cambridge: Cambridge University Press, 1990); Theodore Porter, *The Rise of Statistical Thinking, 1820-1900* (Princeton:

statistics can help shed on some of the central debates still ongoing amongst American historians, be it the relationship between slavery and capitalism, the differences between Alexander Hamilton and Thomas Jefferson or the impact of railroads on American society in the nineteenth century.

Save for Michael Zakim's work on clerks' labor and the epistemology of statistics, the few histories of quantification in America which have engaged in the social history of statistics in the nineteenth century, such as Patricia Cline Cohen's *Numeracy in Early America*, Tom Stapleford's *The Cost of Living in America* and Margo Anderson's *American Census*, only loosely tied their narratives to the emergence of a capitalist society. While these works did reveal some of the social and cultural changes that shaped the census and other statistic-collecting institutions, they did not explore the quantitative vision that emerged out of capital investments in land, railroads, slaves or factories nor did they examine the effect such business practices had on the development of statistical indicators. Furthermore, they did not seek to explain how the decline of patriarchy or the rise of Jacksonian democracy and capitalist relations changed the ways in which moral reformers, laborers, politicians, feminists or clergymen measured progress, valued society or quantified everyday life.²¹

Princeton University Press) and *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, NJ: Princeton University Press, 1995); Stephen Stigler, *The History of Statistics: The Measurement of Uncertainty Before 1900* (Cambridge: Harvard University Press, 1990).

²¹ Michael Zakim, "Producing Capitalism" in *Capitalism Takes Command* (Chicago: Chicago University Press, 2012); "Inventing Industrial Statistics," *Money Matters: The Law, Politics, and Economics of Currency*, a special issue of *Theoretical Inquiries in Law*, 11.1 (2009); While similar in our approaches, the biggest difference between Zakim's work and my own is his belief that there was in fact something inherently "capitalist" about the very epistemological nature of statistical standardization and quantification. As he notes in the first line of his article, "Statistics were an industrial invention." Patricia Cline Cohen, *A Calculating People: The Spread of Numeracy in Early America* (Chicago: Chicago University Press: 1982); Margo Conk Andersen, *The American Census: A Social History* (New Haven: Yale Press, 1988); Tom Stapleford, *The Cost of Living in America: A Political History of Economic Statistics, 1880-2000*. (Cambridge: Cambridge University Press, 2009). See also

In most instances, the work that has been done on the history of statistics in America has, in fact, skipped over my most crucial question: Why have certain statistics became our measures of progress instead of others? In Cline Cohen's impressive work on numeracy, for instance, there is a detailed chapter on the battle which ensued over supposed errors that were found in the section of the 1840 census which focused on African American insanity statistics. Cline Cohen, however, did not seek to explain why insanity statistics were collected in the first place, why they were taken so seriously by both southerners and northerners, or how they were linked both to the rise of Jacksonian Democracy and the Panic of 1837. Nor did she seek to explain why, ten years later, most sectional arguments by both northerners and southerners stopped using these figures to prove that their society was more advanced and instead turned to an array of economic growth statistics. In Thomas Stapleford's *The Cost of Living in America* we get an excellent sense of how the birth of the Consumer Price Index in the Gilded Age shaped twentieth century American wealth redistribution yet we do not receive an intellectual, cultural or economic explanation as to why cost-of-living statistics became so bureaucratically important in the first place and how this statistic severely limited the field of possible economic discourses and policies in America.

Part of what is missing in these narratives is the role that power, class and ideological conflict has played in the shaping of economic statistics. While works on statistics have rightfully focused on the state, they have often tended to separate

Mary O. Furner, "Knowing Capitalism: Public investigation and the labor question in the long Progressive Era", Supple and Furner eds., *The State and Economic Knowledge: The American and British Experiences* (New York: 1990) ; James Leiby, *Carroll Wright and Labor Reform: The Origin of Labor Statistics* (Cambridge: Harvard University Press: 1960).

bureaucratic developments from the larger social, cultural and intellectual debates of the time. This approach creates a narrative in which there are many statisticians, economists and bureaucrats, but very few industrialists, labor radicals or slave-owners. For example, a fairly large amount of research has been done on Carroll Wright, the Gilded Age chief of the Massachusetts and federal bureau of labor statistics. Yet in these previous works the tremendous impact that industrial capitalists such as Edward Atkinson had on the economic statistics Wright chose to collect is largely absent. In my dissertation, the state and its statistic-collecting institutions are not seen as entities with their own internal logic but rather as fierce battlegrounds where different economic ideas and social values fight for cultural authority.²²

The notion of a coordinated elite class which transcends public and private boundaries builds on past works of the "corporate liberal" variety. Ever since Gabriel Kolko discovered that most railroad presidents were actually in favor of government intervention, the corporate liberal school has been a staple of American historiography – and rightfully so.²³ Since the time of Kolko and James Weinstein, however, it has split into two main methodological camps: While historians such as Allan Brinkley have focused mostly on the state in their attempt to understand why government policymakers became supportive of a corporate-run society, other scholars, such as Jackson Lears, Jeff Sklansky

²² For this "internalist" approach to Wright see Stapleford, *The Cost of Living in America*; Furner, "Knowing Capitalism" and Leiby, *Carroll Wright and Labor Reform*.

²³ See Gabriel Kolko, *The Triumph of Conservatism 1900-1916* (New York: The Free Press, 1963); James Weinstein, *The Corporate Ideal in the Liberal State* (Boston: Beacon Press, 1968). For a similar take on the New Deal see Ronald Radosh, "The Myth of the New Deal," Radosh and Murray Rothbard, eds. *A New History of the Leviathan: Essays on the rise of the American Corporate State* (New York: Dutton, 1972) 146-187; Barton Bernstein, "The New Deal: The Conservative Achievements of Liberal Reform," in Bernstein, ed., *Towards a New Past: Dissenting Essays in American History* (New York: Random House, 1967).

and James Livingston, have looked to class-based theories of cultural and intellectual hegemony in order to explain the relationship between capitalism and governance.²⁴ There are strengths and weaknesses to both these camps. Brinkley's state-centered approach allows for a nitty-gritty political history but it also tends to view the state in a cultural, political and intellectual vacuum. A more cultural and social approach is good at showing the power of class and ideology but sometimes remains rather vague and ungrounded regarding the actual practices that allowed certain ideas to become hegemonic. One goal of this dissertation is to combine these two branches, thus creating a state-centered political history of capitalism that is still sensitive to the role that not-state actors such as financial journals, business lobbyists, Harvard University or the American Social Science Association have played in transforming the logic of capital into the logic of society.

Finally, it is important to note that, in recent years, some books have approached the issue of economic statistics and the birth of "the economy" in ways similar to mine. Timothy Mitchell and Adam Tooze are excellent examples of this new scholarship, although they too have a tendency to focus far more on bureaucrats and economists and far less on capitalists or financial journalists. More importantly, however, they focus on Egypt and Germany and look only at the twentieth century. One of the main interventions of my

²⁴ For the state-centered approach see Alan Brinkley, *The End of Reform: New Deal Liberalism in Recession and War* (New York: Vintage, 1995); Colin Gordon, *New Deals, Business, Labor and Politics in America* (Cambridge University Press, 1994); Kim McQuaid, "Corporate Liberalism in the American Community," *Business History Review* 52 (1978); Steven Skowronek, *Building a New American State: The Expansion of National Administrative Capacities, 1877-1920* (Princeton: 1982); Theda Skocpol, "Political Response to Capitalist Crisis: Neo-Marxist Theory of the State and the Case of the New Deal," *Politics and Society* 10, no. 2 (1980): 155-202. For the hegemonic, cultural approach see Jeffrey Sklansky, *The Soul's Economy: Market Society and Selfhood in American thought, 1820-1920* (Chapel Hill: UNC Press, 2002); R. Jeffrey Lustig, *Corporate Liberalism: The Origins of Modern American Political Theory* (University of California, 1982); James Livingston, *Origins of the Federal Reserve System: Money, Class and Corporate Capitalism 1890-1913* (Ithaca: Cornell, 1990); Jackson Lears, *No Place of Grace: Antimodernism and the Transformation of American Culture, 1880-1920* (Chicago, 1981). Cohen, Nancy. *The Reconstruction of American Liberalism, 1865-1914*. (Chapel Hill: University of North Carolina Press, 2002).

dissertation is to argue that the social forces which shaped the rise of modern capitalist economic indicators – such as railroad corporations, urban real estate speculation, sovereign debt and plantation slavery – emerged at least in part only in America and the Atlantic World, not the Middle East or even Europe, and in the nineteenth century, not the twentieth. While Mitchell and Tooze tend to emphasize the invention of GDP in the 1930s and the rise of Keynesian macroeconomics, my narrative views such developments as the final chapter of a much earlier story. To uncover the intellectual, social, economic and cultural origins of modern economic statistics, as well as the historical moments in which other alternatives became obsolete, I believe that one must go back not only to the Great Depression, World War I or the Progressive Era, but to Alexander Hamilton, Thomas Jefferson and the very founding of the United States.²⁵

Capitalization and the History of Capitalism

In very broad strokes, American historians who have written on the history of capitalism have fallen into three main camps: Marxian, Smithian and Weberian. None of these three camps are wrong, yet alone they remain incomplete as they all miss crucial characteristics of capitalist societies. In the Marxian school, capitalism centers largely on the notion of capital accumulation through class exploitation, which takes the form of wage labor. American labor historians such as Sean Wilentz, Harry Braverman and David Montgomery could be said to lead this camp. The main problem with such an approach to capitalism is that the extraction of surplus value need not take the form of wage labor.

²⁵ Mitchell, “Fixing the Economy”; *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley, University of California Press, 2002); Adam Tooze, *Statistics and the German State: The Making of Modern Economic Knowledge* (Cambridge: Cambridge University Press, 2011), and “Trouble with Numbers: Statistics, Politics, and History in the Construction of Weimar’s Trade Balance, 1918- 1924,” *American Historical Review*, 113.3 (June 2008), 678-700;

Rent-seeking landowners, slave-owning planters and credit-lending financiers, three figures who play a prominent role in this dissertation, accumulated capital not through wage labor but rather through a monopoly on land and credit or via the institution of slavery.²⁶

In the Smithian school, on the other hand, capitalism often becomes synonymous with market *exchange*. While all very different, the writings of Joyce Appleby, Winifred Rothenberg, William Cronon and even Charles Sellers fit this mold as they all tend to focus on the changes wrought by increased market integration and a division of labor.²⁷ The main problem with such an approach is that markets have been around for centuries yet capitalism has not. Such a focus on commodity exchange often conflates *commercial* societies with *capitalist* ones by not placing the proper emphasis, in my opinion, on the most crucial, definitive and exceptional process within a capitalist society – long-term capital *investment*. To understand this better, I will momentarily turn to Marx for assistance.

While imperfect, I believe that a useful way to get at some of the major differences between commodity exchange and capital investment (and hence between commercial and

²⁶ Marx, Karl, and Friedrich Engels. *Wage-labor and Capital* (New York: Labor News Company, 1902) Marx, Karl. *Capital: A Critique of Political Economy* (Digireads.com Publishing 2004); Some works of American history that more-or-less fit this mold by focusing on the exploitative relationship of wage labor might include Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century* (New York: Monthly Review Press, 1975) Sean Wilentz, *Chants Democratic: New York City & The Rise of the American Working Class, 1788-1850* (New York, Oxford University Press, 1984); David Montgomery, *The Fall of the House of Labor: The Workplace, the State and American Labor Activism, 1885-1925* (Cambridge: Cambridge University Press, 1987)/

²⁷ Adam Smith, *The Wealth of Nations*; Joyce Appleby, *Capitalism and a New Social Order: The Republican Vision of the 1790s* (New York: New York University Press, 1984); William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W.W. Norton, 1991); Sellers, *Market Revolution*. Winifred Rothenberg, *From Market-Places to a Market Economy: The Transformation of Rural Massachusetts, 1750-1850* (Chicago: Chicago University Press, 1992).

capitalist societies) is to borrow Marx's somewhat crude depiction of commercial exchange processes as “C-M-C” and capital investment processes as “M-C-M'.” In a C-M-C transaction, commodities (C) are exchanged in the market for money (M) which is then used to purchase other commodities (C) for consumption. Note that in this commercial worldview money is merely a means to an end rather than an end in itself. The pursuit of profit is not the driving force of this process since the entire logic of the exchange is built upon the principals of balance and equivalence: The commodity sold and the commodity consumed are both worth M dollars. It is important to note that such commercial exchange does not shun wealth-seeking behavior. The more you labored and hence produced, the more you can then consume. Nevertheless, such a market-based exchange, I argue, cannot be defined as “capitalist.” Let us turn to M-C-M', the social process of capital investment, to see why. First off, it is important to see the many resemblances in these two social processes: Both involve markets, commodities and money. Yet in the process of M-C-M', M amount of money is invested into a production process in order to create a commodity that can then be sold for M'. This economic activity is only logical if M' is greater than M. At the heart of this system, therefore, lies the profit motive as well as the notion that more and more capital must always be accumulating. We also see that the goal of such a process is not the actual production or consumption of goods but rather capital gains. Rather than being based on commercial principals of equivalence or balance, such a system - much like the GDP indicator which measures investment successes and failures today - is based on the capitalist principal of continuous economic growth.²⁸

²⁸ For C-M-C and M-C-M' process see Marx, *Capital*, chapter 4 (“The General Formula for Capital.”)

Finally, there is the Weberian school, which centers largely on the notion of *rationalization*. Unlike the Marxian and Smithian schools, the Weberian camp defines capitalism less as a system of distinct processes or institutions (i.e. wage labor, investment, banks, markets) and far more as a way of *seeing*.²⁹ While I am partial to such a view, the main problem with this approach is that there can exist highly rationalized and bureaucratic forms of society that are not necessarily capitalist. In the Weberian approach, we often see a conflation between enlightenment values – reason, rationality, calculation – and capitalism. To give a quick example, it is easy to forget that Weber's prototypical "capitalist" in *The Protestant Ethic* was none other than Benjamin Franklin. While Franklin, as this dissertation will show, was undoubtedly fond of statistical calculations and rationalized forms of thinking, one would be hard pressed to label a man who was not a businessman, despised industrial manufacturing and once referred to commerce as "cheating" as the prototypical capitalist.³⁰

I have examined these three approaches because while this is a dissertation on the history of economic indicators, it is also an attempt to tell the history of the rise of capitalism in America. I try to do so by incorporating and synthesizing the aforementioned approaches to capitalism while working out some of the problems inherent to each. Like Marx, I believe capital investment and accumulation, or M-C-M', lies at the heart of the

²⁹ Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Talcott Parsons, foreword by R. H. Tawney (London : G. Allen & Unwin, Ltd., 1930); Guenther Roth, "Rationalization in Max's Weber Development History" in *Max Weber, Rationality and Modernity*, ed. Scott Lash and Sam Whimster. (Allen & Unwin, 1987); Wolfgang Schluchter, *The rise of Western rationalism: Max Weber's developmental history*, trans., with an introduction, by Guenther Roth. (Berkeley: University of California Press, c1981).

³⁰ Weber, *Protestant Ethic*; In 1769 Franklin said that "there seem to be but three Ways for a Nation to acquire Wealth. The first is by War as the Romans did in plundering their conquered Neighbors. This is Robbery. The second by Commerce which is generally Cheating. The third by Agriculture the only honest Way." Benjamin Franklin, *The Works of Benjamin Franklin: Including the private as well as the official and scientific correspondence*, 4 (New York, 1904), 238.

system we refer to as capitalism. Like Smith, I believe that the market interdependence which emerged out of an extreme division of labor played a crucial role in the rise of a capitalist society as it helped create a social world in which more and more human interactions are mediated through abstract markets, money and statistics as opposed to kinship ties, custom or face-to-face interactions. Finally, like Weber, I agree that capitalism was, first and foremost, a way of seeing, quantifying and valuing the world. Studying how businessmen quantified the world around them has revealed to me the ever-changing bundle of values that undergirded the capitalist vision of American society in the nineteenth century. This dissertation will show that some of the key values of this capitalist worldview included growth, productivity, predictability, efficiency, inequality, futurity, materialism, functionalism, standardization, maximization, consequentialism and instrumentalism. Note you will not find “individualism” on this list. That is not a coincidence, and it is a point I shall return to shortly.

In this dissertation, I often use the verb “capitalize” and the noun “capitalization.” To understand what I mean by this term, which I use as shorthand to describe a varying set of changing processes that share certain common characteristics, let us begin with the definition of “capitalize” in the dictionary. According to Merriam-Webster, to capitalize means “to convert into capital,” “to compute the present value of something by calculating its future income,” “to supply capital for,” and, in a non-economic sense, “to gain by turning something to advantage.” Putting all these definitions in play at once, one can get a sense of how I use the word in my work. To capitalize is to attempt to build social processes, institutions and relations which can transform something, someone or somewhere into a profitable, stable, and ongoing money yielding, profit-seeking investment (M-C-M’). Before,

however, any nineteenth century businessmen invested their capital in constructing a railroad, purchasing a slave or dividing wilderness into urban lots, they first *imagined* themselves doing so. To capitalize, therefore, was first and foremost an act of quantification and calculation – it was a way of seeing as well as a way of thinking. As my dissertation will demonstrate, this capitalizing vision required nineteenth century businessmen to translate people, nature and time – all the inputs that go into any capitalization process – into a series of priced entities. Capitalization, of course, was not only about seeing. It was also about the construction of very real social, legal, technological, cultural and economic institutions and relations, be it chattel slavery or corporate limited liability, that enabled products of human labor or nature's bounty to be funneled into steady future streams of income. But such institutions, relations and technologies, I argue, were constantly being shaped and reshaped by the ways in which Americans chose to quantify different aspects of their world into numbers, graphs and tables.

Finally, I have taken time to parse out the differences between commercial exchange (C-M-C) and capitalization (M-C-M') because I think it is a useful way to look at American history. These two very different social processes, I argue, played a leading role in the shaping of two very different economic ideologies in nineteenth century America. In many ways, the early American republic looked a great deal like Marx's C-M-C model of commercial exchange as the United States prior to the 1830s mostly consisted of patriarchal households of petty commodity producers who exchanged their surplus products for finished consumer goods in local, national and international markets. Most early republic Americans in this patriarchal-commercial society, even merchants and slave-owners, were not profit-maximizers and viewed the household as the central social and

economic unit of society.³¹ Based on the tenets of private property, proprietary independence (for the male white patriarch), commercial production and the labor theory of value, this system of simple commodity exchange shaped the political and economic worldviews of a large spectrum of middle and working class Americans throughout the nineteenth century, be they farmers, skilled laborers, merchants or shopkeepers. Past historians have labeled this patriarchal, proprietary, and producerist ideology as agrarian, Jeffersonian, Jacksonian, Radical Ricardian, “free labor,” populist, artisanal and, of course, Republicanist.³² While there are crucial distinctions to be made here, I still believe that all these worldviews are far more alike than they are dissimilar and they can therefore be placed under the single umbrella term of “patriarchal commercialism.”

I believe it is the ideological tensions between capitalism and patriarchal commercialism – and not, as in Europe, the conflicts between capitalism and communal, anti-proprietary socialism - that should be placed at the center of American political, economic and intellectual history. The most important social, cultural, intellectual and political transformations in the nineteenth century – in both the industrializing North and the enslaving South – can be attributed, therefore, to the slow and contested eclipse of a

³¹As Thomas Cochran has noted, “Merchants [in the early republic] did not balance their books with a view to determining net worth.” Cochran, “The Entrepreneur in American Capital Formation” in National Bureau of Economic Research, *Capital Formation and Economic Growth* (Princeton: Princeton University Press, 1955); See also Naomi Lamarqueaux, “Rethinking the Transition to Capitalism in the Early American Northeast,” *The Journal of American History*, 90 (2003): 437-461. As for slave-owners, I argue in this dissertation that only in the 1820s – with the cotton boom and the emergence of the internal slave trade – did southern slave-owners begin to see their slaves not only as property but as capital and their plantations as profit-maximizing enterprises.

³² For Jeffersonian see Drew McCoy, *The Elusive Republic: Political Economy in Jeffersonian America* (New York: Norton, 1982), perhaps the best synthesis of the patriarchal commercial worldview of the early republic. For Radical Ricardians and artisanal-republicanism see Wilentz, *Chants Democratic*; For Free Labor see Eric Foner, *Free Soil, Free Labor, Free Men: The Ideology of the Republican Party Before the Civil War* (New York: Oxford University Press, 1976) (1970). For Populism see Charles Postel, *The Populist Vision* (Oxford: Oxford University Press, 2007); For Republicanism see Daniel Rodgers, “Republicanism: Career of a Concept” *Journal of American History*, 79:(1992) 11-39.

patriarchal commercial society by a capitalizing one. While each chapter in this dissertation draws out certain aspects of how this conflicted process occurred over time, one central, recurring theme should be mentioned here: the place of the individual in a society. This dissertation argues that the notion that capitalism should be equated with individualism is highly problematic. Let us return one last time to the example of intemperance statistics with which I opened this chapter. As a comparison of Weld's moral statistics and the Albany businessmen's proto cost-benefit analysis indicates, both these statistical visions treated Americans very differently. In Weld's Jacksonian statistics, people were at the center of society and progress was defined by their physical, mental and social wellbeing. For the Albany businessmen, on the other hand, people were the means to a growth-maximizing end rather than the end in itself. In Weld's moral statistics, the unit of measurement was people. In the Albany businessmen's growth figures, it was money. Crucially, this is not to say that economic growth did not often lead to societal wellbeing in nineteenth century America. Clearly, productivity gains brought on by capitalists' desire for healthy returns helped create a society in which Americans usually lived longer and ate better. Nevertheless, such improvements were not the main goals of railroad capitalists, slave-owners or textile manufacturers but rather some of the many consequences that emerged out of the need for never-ending capital returns.

While this dissertation focuses on the ideological tensions between patriarchal commercialism and capitalism as well as the idea that market exchange and capital investment are two very distinct economic actions, previous American historians often have not made these distinctions. As the term "market revolution" suggests, even the clearly left-leaning Charles Sellers seemed to believe that where you have markets,

commodities, money, trade, commerce and exchange – you have capitalism. One of the main objectives of my dissertation is to show that historians should not simply equate market orientation with capitalism and that markets alone do not a capitalist society make.³³ Very briefly, I will give an example of this from my first chapter: In 1791, Alexander Hamilton sent a statistical survey out to American farmers across the nation in order to ascertain what was more “productive” – manufacturing or agriculture. Imagining farms as capitalized investments, Hamilton asked them a seemingly simple question: After pricing all the goods produced on a farm in a year, what would be your annual revenue? Now yeoman farmers in early America were fairly market-oriented. Their account books were filled with cash exchanges. Yet they could not answer Hamilton’s question. That is because Hamilton viewed the family farm as an income-yielding investment, while early Americans saw it as their livelihood. Both Hamilton and the yeoman farmers wanted wheat and shoes to be bought and sold in the marketplace, but only Hamilton needed to know precisely how much money the family farm could produce in a year in order to calculate potential returns on capital.

By focusing on the role that economic indicators played in the construction of the American economy, I also hope to shift the history of capitalism away from market transactions and towards corporate and government planning. We should think of capitalism, I argue, more as a system of coordinated public and private planning than one of individualistic exchange. In this sense, my project can be seen as a continuation of Alfred Chandler’s “visible hand” argument that challenged the idea that the most dominant characteristic of a modern, capitalist society is the production and exchange of

³³ On the crucial difference between commercial and capitalist societies I am indebted to Fernand Braudel, *Civilization and Capitalism* (Berkeley: University of California Press, 1992).

commodities via free market mechanisms. Yet while business historians have long recognized the importance of data in managing a large-scale corporate society, they have mostly focused on statistics at the level of the firm. This dissertation argues that we must go beyond the firm and show how these management techniques came to be used as tools for running not only companies but an entire society. Instead of focusing only on the microeconomics of the corporation, we must explore the macroeconomics of the nation. Instead of only analyzing the visible hand of the firm, we must examine the visible hand of everyday life.³⁴

Sources

My main sources are people who counted. The sites of quantification I use as sources include farmers' diaries, plantation account books, church sermons, moral reform pamphlets, prison and insane asylum reports, government bureaus, capitalists' "back-of-the-envelope" calculations, corporate reports to shareholders, census returns, private correspondences and business magazines. Sometimes, however, statistical thinking cropped up in less conventional places such as presidential speeches, utopian fantasies, anti-slavery tracts and feminist literature. In a surprising twist I did not expect when I began to write a dissertation on the history of social quantification, this project contains a somewhat star-studded cast: Thomas Jefferson, Alexander Hamilton, Benjamin Franklin, Andrew Carnegie, James Henry Hammond, John Calhoun, Horace Mann, and Edward Bellamy all explored ways of measuring and valuing American life. That said, there are

³⁴ Alfred Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass: Belknap Press, 1977); For the importance of data in the managerial revolution see Chandler, *Visible Hand*, 109-120 and Thomas C. Cochran, "The Business Revolution," *American Historical Review* 78 (1974): 1449-1466.

many fresh faces as well which few historians have explored such as Freeman Hunt, the founder of the first business magazine in the country, Edward Atkinson, a cost-cutting industrialist who helped invent the calorie, George Tucker, a southern economist who wrote the first science fiction book in American history, Leona Barry, the Knight's of Labor's premier statistician, and Samuel Blodget, a Washington DC businessman who generated the first GDP-like figures in America while being held in a debtor's prison.

I believe, however, that one set of sources to be of particular import: Financial journals. Amazingly, the history of financial journals and their editors has remained almost non-existent. In *Anti-Intellectualism in American life*, Richard Hofstadter noted that "a cultural history of the business magazine might be illuminating." It appears that no historian has yet to take him up on his offer.³⁵ This dissertation seeks to fill in this gap by leaning heavily on financial journals such as *Hunt's Merchants Magazine*, *Poor's Railroad Journal* and *De Bow's Southern Review*. In doing so, I not only cover the content of these magazines extensively but take a "behind the scenes" look into the men who ran them.

Chapter Outline:

The dissertation traces the uneven, contested process in which capitalizing statistical indicators slowly went from the fringes of American society to the mainstream. Chapters one and two trace the intellectual origins of capitalizing statistics back to seventeenth century England and then tries to explain the failure of such priced productivity and market growth figures to gain traction in early America. In England, this

³⁵ Richard Hofstadter, *Anti-Intellectualism in American Life* (New York: Vintage, 1966) 247-250. A few histories of specific financial journals or editors exist, but none of these explore the larger cultural, social or even economic impact that these magazines have had on the American public in the nineteenth century. See Dan Parsons., *The Power of the Financial Press* (New Brunswick: Rutgers University Press, 1990); Douglas Steeples, *Advocate for American Enterprise: William Buck Dana and the Commercial and Financial Chronicle* (Westport, Conn: Greenwood Press, 2002); Alfred D. Chandler, *Henry Varnum Poor, Business Editor, Analyst, Reformer* (New York: Arno Press) 1981.

chapter examines William Petty, the father of “political arithmetic” and the first person to price everyday life into GDP-style growth indicators. Turning to early America, the focus shifts to founding father Alexander Hamilton’s failed attempts to use Petty-inspired price statistics in order to convince his fellow Americans that they should support industrialization since capitalized factories would be more conducive to growth than the family farm. I argue that except for a few eastern businessmen and southern planters (including George Washington), Hamilton’s statistical vision failed to catch on because most American farmers did not view agriculture as a capitalized investment but rather as the source of their livelihood and republican independence. Despite their rejection of a capitalist statistical vision, however, these chapters show how the early republic abounded with statistical almanacs, gazetteers and atlases as Americans developed an alternative series of economic indicators, such as population density statistics, through which to gauge and quantify the young republic’s material progress. Many of these statistical indicators embraced markets yet did not tear asunder the American patriarchal household by transforming land and labor into abstract, monetized assets of capital accumulation.

Chapter three explores how *Hunt’s Merchants Magazine*, the first national business periodical in America, transformed urban population statistics into an indicator that could help eastern capitalists choose in which western cities they should invest capital. These figures, I argue, helped businessmen re-imagine the American people as sources of pecuniary profit – as human capital. Chapters four and five demonstrate how the statistics used by northern and southern elites in their disputes over slavery shifted radically in the 1850s. Throughout the 1830 and 40s, both sides measured their region’s prosperity using what they referred to as “moral statistics” such as insanity rates, literacy, incarceration,

prostitution, mortality and pauperism. By the 1850s, however, the statistical focus in *both* the north and the south shifted to economic growth and market productivity. Contending that the worldview of eastern investors and southern planters was not as polarized in the years before the Civil War as some historians have suggested, and that the North and South should be understood as a tale of two capitalisms, I argue that it was the westward expansion of the railroads in the North and the cotton boom and internal slave trade in the South that led to this joint shift towards capitalization statistics.

Chapter six looks at the political struggles that raged over which economic indicators would be canonized by the state as the benchmarks of American progress in the Gilded Age. It examines how skilled wage laborers and the Knights of Labor battled economists, business-minded bureaucrats and politically-engaged businessmen for control of the state bureaus of statistics and the power to decide how the American government would measure societal wellbeing. These laborers generated alternative indicators of progress by collecting data on inequality, poverty, exploitation, education, gender discrimination and social immobility. Save for a few key concessions, however, it was the business elite's market productivity and cost-of-living statistics which became institutionalized by the emerging regulatory state at the turn of the twentieth century, thus setting the stage for the invention of GDP, Consumer Price Index, consumer spending and the other economic indicators we moderns know so well.

Chapter One

Seeing like a Capitalist: The Hamiltonian Origins of How Capitalists Count

In the summer of 1791, Secretary of the Treasury Alexander Hamilton went hunting for data from which he could create some statistical economic indicators. Preparing to write his soon-to-be famous “Report on Manufacturing,” Hamilton planned to augment his argument for the government subsidization of American manufacturing by generating statistics which would reveal to the American public as well as foreign investors the underestimated productivity of American “manufactories” in comparison to agriculture. Treating both farming and manufacturing not as callings, crafts or occupations but rather capital investments, he intended to collect the market prices of all the goods Americans produced and then aggregate them into commensurable statistics that would compare the priced output of farm and factory. Such statistics, he hoped, would prove that Americans’ obsession with farming was leading them not to maximize the potential wealth of the nation, or as he referred to it, “the aggregate value of the annual produce of the land and labor of the country.” Half a year later, in the finished report, he made clear what his statistical objective had been that previous summer:

The question must still be, whether the surplus, after defraying expenses of a given capital, employed in the purchase and improvement of a piece of land, is greater or less, than that of a like capital employed in the prosecution of a manufactory...Or rather, whether the business of agriculture or that of manufactures will yield the greatest product.³⁶

In his statistical search for “the greatest product,” Hamilton took advantage of the recently established web of federal tax collectors he himself had assembled and dispersed across the nation. According to the much-despised “Whiskey Tax” law Hamilton had

³⁶ Alexander Hamilton, *The Reports of Alexander Hamilton*, ed. Jacob E. Cooke (New York: Harper & Row, 1964) 121.

recently penned, treasury officials were supposed to venture from town to town, collecting an excise tax on domestically distilled spirits that would go to the funding of the national debt – yet another Hamiltonian innovation. Displaying his usual knack for overstepping official bounds, Hamilton wrote to the tax-collectors requesting that while they scoured the land for whiskey they also collect information on “the manufactures of every kind carried on within the limits of your district.” More specifically, Hamilton instructed his men to collect data on “the quantities periodically made” and “the prices at which they were sold” and “whether they are carried on by Societies, Companies or Individuals.” He then sent a similar letter to a number of leading manufacturers.³⁷

To complete his statistical experiment, however, Hamilton needed to compare the aggregate annual revenue of manufacturing to the aggregate annual revenue of farming. “It has occurred to me,” he wrote in a second letter to his tax-collectors and several wealthy farmers, “that if the actual product on cultivated farms of middling quality could be ascertained with tolerable precision, it might afford as good a rule, by which to judge as the nature of things admits of.” Enclosed with each letter was a “form with a number of columns,” which he asked be distributed to a few local farmers in each district. Like the manufacturing data he had requested, the columns included the “actual quantity in cultivation” as well as the total cash revenue from these goods. “The price,” Hamilton felt the need to explain, “ought to express the value of each article on the farm. Perhaps to

³⁷ “Treasury Dept Circular to the Supervisors of the Revenue,” June 22nd, 1791, in *The Papers of Alexander Hamilton*, ed. Harold C. Syrett, assoc ed. Jacob E. Cooke (27 vols, New York, 1961-87) 8:497-8; This was in fact the second time that Hamilton had sought out economic data on American manufacturing. On January 25th, 1790 he sent a similar request to Benjamin Lincoln, *Papers of Alexander*, 6:208.

determine this there is no better rule than to deduct the expense of transportation from the price at the nearest usual market.”³⁸

As the results began to pour in during the fall of 1791, Hamilton must have soon realized that he had grossly miscalculated the quantitative bent of the citizens of the United States. In response to Hamilton’s inquiries regarding manufacturing data, Silas Condict, an artisan from Morristown, New Jersey, could not supply any quantitative information. “I can say that Industry and an attention to Mechanism is gaining Ground, tho’ we have no established Companies or Manufactories carried on here.” No numbers appear in Condict’s letter. He speaks of “great many people” employed in the iron business, how the number of sheep is “fast increasing” and how the silk manufacturers have a “sufficient quantity of eggs” and a “considerable stock of worms.” Peter Colt, a Hartford businessman who likely sensed the level of detail Hamilton was expecting, could only apologize. “I am not possessed of sufficient documents on which to ground any details or calculations as to the amount of the products of our different manufactures or their annual value,” he lamented in his letter. Boston’s Nathaniel Gorham did not supply Hamilton with any quantitative data, instead choosing to note that household manufacturing had doubled in the past generation and a visitor to any New England home would find “cloth almost wholly made by [the family] themselves.” To be sure, not every response was a disappointment. George Cabot, a prominent stockholder in the Beverly Cotton Manufactory, supplied Hamilton with

³⁸ “Treasury Department Circular,” Aug 13th 1791, *Papers of Alexander*, 9:35-6.

impressive data on the annual costs and revenue of his business. The vast majority of responses, however, read nothing like this.³⁹

Hamilton did not fare much better with the yeoman farmers of Pennsylvania. A Bucks County farmer replied that the best he could do was venture some rough estimates due to “the novelty of the subject – and never having kept any regular account of the annual produce of my lands – nor know any person to whom I could apply for such minute information”. A tax surveyor in Pittsburgh told Hamilton that “in a new Country like this where farming is not yet reduced to system, it is difficult to form an estimate as you wish.” Timothy Pickering, a good friend of Hamilton and a prolific land speculator, became most frustrated in his attempt to glean statistics from the other farmers in his Pennsylvania town. First off, Pickering complained, he could not calculate the true value of certain farms because “the residue of the country is without enclosures, where the cattle range at large and where...the people cut wood for timber and fuel for discretion without regarding their own lines of property.” After sending Hamilton data from only a single farm, Pickering concluded his letter by remarking that “it will be impossible to ascertain the requisite facts with precision: For I doubt wither one American farmer in a thousand has determined by actual admeasurement, the size of his fields and their produce.”⁴⁰

If Pickering was right then that one farmer was Richard Peters, the President of the Philadelphia Society for the Promotion of Agriculture. Capitalizing even his cows by calculating that they annually produced £60 worth of butter, calves and cheese, Peters sent

³⁹Condict’s letter enclosed in Dunham to Hamilton, Sept 9th, 1791, *Papers of Alexander*, 9:193; Peter Colt to John Chester; July 12th, 1791, *Papers of Alexander*, 9:319-24; Nathaniel Gorham to Hamilton, Oct 13th, 1791, *PAH*, 9:371-2; Cabot to Hamilton, Sept 6th, 1791, *Papers of Alexander*, 9:177-80.

⁴⁰Henry Wynkoop to Hamilton, Aug 29th 1791, *Papers of Alexander*, 9:123; John Neville to Hamilton, October 27th, 1791; 9:419; Timothy Pickering to Hamilton, Oct 13th, 1791, *Papers of Alexander*, 9:375-7.

in a detailed analysis of his farm's costs and revenues in which he concluded, after discounting the opportunity costs of his cows and other capital investments, that farming was "but a bad trade when Capital is calculated upon." As with the manufacturing data, however, Peters' response was exceptional, not representative.⁴¹

Letters from most artisans, planters and farmers in the south read much like their northern brethren. Silvanus Walker from Charleston, South Carolina noted only that "there is no manufactories carried out in the inferior parts of this state, only in private families, and they in general manufacture as much as they commonly wear." Edward Carrington from Richmond, Virginia gave a similar response, noting that manufacturing "is carried on only by the white females in poor families, and, in wealthy families, under the eye of the mistress, by female slaves drawn out of the estates for that purpose." A farmer in Maryland replied that "if the *value* of things, especially of the Land, can be omitted, the quantities would be more readily...obtained." Apparently, while American farmers did sometimes estimate the quantity of their produce they did not try and price it.⁴²

Nor did they calculate profits. The most detailed responses Hamilton received from northern and southern farmers were later compiled and sent, by none other than President George Washington, to the renowned English political arithmetician Arthur Young, publisher of the statistic-filled *Annals of Agriculture* and a man who never met a farm he did not price. Like Hamilton, Young was disappointed by the fact that, unlike in England, American farmers were not counting like capitalists. "Your information has thrown me

⁴¹ Richard Peters to Hamilton, Aug 27th, 1791, *Papers of Alexander*, 9:114-6.

⁴² Walker letter enclosed in Daniel Stevens to Hamilton, September 3rd, 1791, *Papers of Alexander*, 9:170; Edward Carrington to Hamilton, October 4th, 1791, *Papers of Alexander*, 9:275; The other four letters enclosed by Carrington by other Virginians read much the same way. John Beale Bordley to Hamilton, 11 November, 1791, *Papers of Alexander*, 9:490-2. *Letters from his Excellency General Washington to Arthur Young* (London: McMillan, 1801) 161.

afloat on the high seas,” the puzzled Young noted. “To analyze your husbandry, has the difficulty of a problem. Is it possible, that the inhabitants of a great Continent can carry on farming as a business, and yet never calculate profit by per centage on capital?”⁴³

For Hamilton, the mostly disappointing results he received were only half the problem. While largely unhelpful, at least these northern and southern farmers and artisans exhibited an amicable desire to assist the Secretary of the Treasury. According to the revenue surveyors, many Americans acted as if they were “enemies of the government” and, fearing more taxation, were far less cooperative. Foregrounding the Whiskey Rebellion that would leave some of these very tax collectors tarred and feathered, Hamilton’s attempt at collecting statistical data hinted at the weakness of his entire bureaucratic apparatus. Sure enough, President Thomas Jefferson and the Democratic-Republican Party repealed the excise tax in 1801 and any hope of using treasury officials for future data- gathering mission was quashed.⁴⁴

Unable to collect the price data he had wished for, Hamilton's *Report on Manufacturers* was bereft of all statistical indicators. His venture into the realm of economic statistics had failed miserably. So had his attempt to transform the United States into a manufacturing power: The manufacturing report was the only one of Hamilton’s four reports that Congress did not rush to implement. Judging from Hamilton’s own writings, it appears that he never linked his inability to construct economic statistics with his failure to

⁴³ George Washington, *Letters from his Excellency General Washington to Arthur Young* (London: McMillan, 1801) 161.

⁴⁴ Edward Carrington to Hamilton, October 8th, 1791, *PAH* 9:273. For the Whiskey Rebellion and its aftermath see Thomas Slaughter, *The Whiskey Rebellion: Frontier Epilogue to the American Revolution* (London: Oxford University Press, 1986). On the tar and feathering of Hamilton’s tax collectors see William Hogeland, *The Whiskey Rebellion: George Washington, Alexander Hamilton, and the Frontier Rebels who Challenged America’s Newfound Sovereignty* (New York, Simon & Schuster, 2006), 20-23.

bring large-scale, capitalized manufacturing to the United States. While Hamilton acknowledged that the statistics he needed required “numerous and complicated details” and an “accurate knowledge of the objects to be compared,” he believed that his statistical experiment simply demanded “more previous inquiry and investigation than there has been hitherto either leisure or opportunity to accomplish.”⁴⁵

Hamilton was mistaken. As I show in the following two chapters, Hamilton had failed in both endeavors because the manner in which he viewed and quantified the world had been imported from England and did not mesh with the ideological principals upon which the United States had been founded. In portraying land and labor as priced inputs of production to be plugged into profit-maximizing equations of capital yields and aggregated money values, Hamilton was essentially telling the American people that the patriarchal farming or artisanal household, the anchor of the American republic and the source of its proprietary independence, should be upended solely because it was an inefficient investment that offered low returns on capital. While a few Americans did share Hamilton’s worldview, this capitalizing vision was anathema to most residents of the United States. As a result, not only could Hamilton not use these statistics to bolster his case for American manufacturing, he could not even collect the information he desired.

This is not to say that the majority of early American farmers and artisans were not commercially-inclined or statistically-minded. As we shall see in chapter two, the early republic abounded with statistical almanacs, gazetteers and atlases as Americans

⁴⁵ Cooke, *Reports of Hamilton*, 120. For the outcome of Hamilton’s manufacturing report see Douglas A. Irwin, “The Aftermath of Hamilton’s Report on Manufactures,” *Journal of Economic History*, 64 (Sept., 2004): 800-821; Stuart Bruchey, “Economy and Society in an Earlier America,” *The Journal of American History*, 47 (1987): 299-319. John R. Nelson Jr., “Alexander Hamilton and American Manufacturing: A Reexamination,” *The Journal of American History*, 65 (1979) 971-995.

developed an alternative series of economic indicators through which to gauge and quantify the young republic's material progress. Internalizing a uniquely American ideology I refer to as "patriarchal commercialism" because it was based on both patriarchal households and commercial-minded exchange, many of these quantitative indicators embraced markets yet did not tear asunder the American household by transforming land and labor into abstract, monetized assets of capital accumulation. In short, although early American statistics counted and commodified certain aspects of the material world, unlike Hamilton they did not attempt to capitalize everyday life into income yielding investments.

The Origins of how Capitalists Count

Pausing momentarily in the Federalist No. 21 to ponder the nature of economic indicators, Alexander Hamilton remarked that "the wealth of nations depends upon an infinite variety of causes" which included "situation, soil, climate, the nature of the productions, the nature of the government, the genius of the citizens, the degree of information they possess, the state of commerce, of arts, of industry." As a result, he concluded, "there can be no common standard or barometer by which the degrees of [national wealth] can be ascertained."⁴⁶ A few years later, in his *Report on Manufactures*, Hamilton had clearly changed his mind. While the broader reasons behind this move are more difficult to untangle, the direct intellectual impetus of this shift can be explained rather easily: while preparing to write his report, Hamilton had read Adam Smith. As historians have shown, Hamilton's report paraphrased, if not directly quoted, whole sections of Smith's *The Wealth of Nations*. There is little doubt that Hamilton's new definition of national wealth as "the aggregate value of the annual produce of the land and

⁴⁶ Alexander Hamilton, "Federalist No. 21" in Alexander Hamilton, John Jay, and James Madison, *The Federalist Papers* (Bantam, 1982) 55.

labor of the country” was also taken from Smith, who in numerous places in his magnum opus contended, either implicitly or explicitly, that the wealth of the nation was “equal to the exchangeable value of the whole annual produce of its industry” or “the annual produce of the land and labour of the country.” Although Hamilton devoted much of his report to discrediting Smith’s disdain for government subsidies and mercantilist policies, both men were in agreement regarding the ultimate goal of society: to squeeze the maximum amount of commodified output, measured in market prices, out of a nation’s land and labor.⁴⁷

Smith, however, did not invent this measure of national wealth – a man named William Petty did over a century before him. Thanks to a body of statistical knowledge known as “political arithmetic” that had been formulated first by Petty in the 1660s and then further developed throughout the eighteenth century by the likes of Gregory King, Charles Davenant, Sir John Sinclair and Arthur Young, by the time Smith published his much revered work in 1776 his definition of national wealth had already become a conventional wisdom amongst most economic thinkers in England. To trace the origins of

⁴⁷Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, ed. Edwin Cannan (London: Methuen & Co., Ltd. 1904) Book IV, Ch.2; For an in-depth textual analysis which documents the quotes Hamilton took directly from Adam Smith see Edward G. Bourne, “Alexander Hamilton and Adam Smith,” in *The Quarterly Journal of Economics*, 8 (1894): 328-344. While it has become somewhat popular of late to recast Smith as someone with anti-capitalist values and pretensions, I see him as a key intellectual leader of capitalist thought and culture for numerous reasons: His main focus was on productivity and commodified growth; entrepreneurial profit served as the engine of his entire social system; his hierarchical society of landowners, capitalists and laborers did not emphasize republican equality or democracy but rather a fairly rigid class order. In short, I find it far from a coincidence that the opening scene in Smith’s *Wealth of Nations* takes place not in some free-wheeling marketplace but rather a pin factory where market productivity is being maximized. For a narrative that portrays Smith in a very different light see Emma Rothschild, *Economic Sentiments: Adam Smith, Condorcet, and the Enlightenment* (Cambridge: Cambridge University Press, 2001); For a long list of works which portray Hamilton as an anti-Smithian, anti-laissez-faire “mercantilist” thinker see Stanley Elkins and Eric McKittrick, *The Age of Federalism: The Early American Republic, 1788-1800: The Early American Republic, 1788-1800* (New York: Oxford University Press 1995) 774, fn64.

Hamilton's statistical vision, therefore, we must briefly return to the statistical work of William Petty in mid-seventeenth century England.⁴⁸

In those tumultuous times of social dislocation and not-so-primitive capitalist accumulation, it was the dramatic upheavals in the English countryside which first provoked Petty's statistical revolution. Due to the rising European market for grain and woolen goods, by the turn of the sixteenth century many English landholders had come to recognize the potential profit in transforming subsistent plots, marshy fens, and peasants' commons into privately owned, staple-producing farms. Unable to control freehold peasants' labor or their use of the commons, English landholders confiscated, consolidated and enclosed large tracts of lands. In a long and complex process that peaked in the sixteenth and seventeenth centuries, millions of freehold peasants lost their rights to the fruit of the land. In their place, a profit-oriented tenant farmer rented out and ran the consolidated farms, paying the now landless peasants subsistence wages.⁴⁹

By William Petty's day in 1660, 75 percent of English lands were organized in such a manner and England was awash with pamphlets on agricultural improvement that

⁴⁸ For the history of English political arithmetic Eli Cook, "The Pricing of Everyday Life," *Raritan Quarterly Review*, 32 (2013): 109-121; Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (Chicago: Chicago University Press, 1998); Peter Buck, "People Who Counted: Political Arithmetic in the Eighteenth Century," *Isis*, 73 (1982): 28-45; Richard Stone, *Some British Empiricists in the Social Sciences, 1650-1900* (Cambridge, 1997); David McNally, *Political Economy and the Rise of Capitalism* (Berkeley: California University Press, 1988) 22-85; Ted McCormick, *William Petty and the Ambitions of Political Arithmetic* (Oxford: Oxford University Press, 2009).

⁴⁹ My synthesis of the English transition from feudalism to capitalism has been influenced by the following works: Maurice Dobb, *Studies in the Development of Capitalism* (London, 1946); Robert Brenner, "Agrarian Class Structure and Economic Development in Pre-industrial Europe," *Past and Present*, 70 (Feb., 1976.), 30-75; E.J. Hobsbawm, "The General Crisis of the European Economy in the 17th century," in *Past and Present*, 5 (1954), 33-53; E.P. Thompson, "Time, Work-Discipline, and Industrial Capitalism," *Past & Present*, 38 (1967): 59-97. Christopher Hill, *The Century of Revolution, 1603-1774* (Edinburgh, 1961); Joyce Appleby, *Economic Thought and Ideology in Seventeenth Century England* (Princeton: Princeton University Press, 1978); Immanuel Wallerstein, *The Modern World System: Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century* (New York, 1976).

advised profit-oriented farmers how best to maximize the amount of grain or wool they could sell in the market. Often, the titles of these books said it all:

A discoverie for division or setting out of land, published by Samuel Hartlib esquire, for direction and more advantage and profit of the adventurers and planters in the fens and other waste and undisposed places in England and Ireland...with a philosophical query concerning the cause of fruitfulness, and an essay to shew how all lands may be improved in a new way to become the ground of the increase of trading and revenue to this common-wealth.⁵⁰

Increased fruitfulness, increased profit, and increased revenue to the commonwealth - this was the recurring message in all these works. With expressions such as “its publique good to quicken industry,” these books made sure to equate private profit and public good, arguing that the radical changes occurring in the English countryside would benefit everyone. They even wrote poems:

GO tell the World of Wealth that's got with ease,
Of certain profit (gain most men doth please)
Of Lands Improvement to a treble worth,
A Five, a tenfold Plenty's here held forth;
The greedy Land-Lord may himself suffise,
The toyling tenant to estate may rise,
The poor may be enricht, *England* supplyid
For twice so many people to provide;
Though this a Paradox may seem to you,
Experience and Reason proves it true;
By floating dry, and purging Boggy Land,
The Plough old Pasture betters to your hand;
Directions to Inclose, to all mens gain,
Minerals found out, Land rich'd with little pain;
Woods ordred so, in few years yeeld such store,
So large, so good as you'l desire no more.

⁵⁰ The statistic on English lands is taken from Hobsbawm, “The General Crisis”; Samuel Hartlib, *A Discoverie...* (London, 1653).

With a human labor force that could now be hired and fired, these agricultural improvers began to imagine peasants as abstract, mobile units of capital investment that could be allocated in different ways. Take, for example, how the working day was described:

He plowed his 8 acres a day, he found but 3 men to the work, he went to plow with two Teems, two horses and one man to one plough, and two horses and one man together in the morning, & one man to shift them at noon, and meat and gear them, and then he brought in two Teem in the afternoon, two horses in a Teem with the same men, and so plowed, as aforesaid, his eight acres: I saw the ground thus plowed, & the poor man got his three shilling and four pence for his men and himself, that is ten pence a day a man, which is good wages in Norfolk.⁵¹

In order to efficiently allocate these mobile units of priced labor, the authors of these improvement treatises turned their focus to productivity calculations, or as one work put it, “a general computation of men and cattel’s labours: what each may do without hurt.” Calculations regarding how many acres one man could plow in a day if it was “stiff ground” (2.5 acres), “light ground” (4 acres “at least”), or a “rough uneven meadow” (1 acre) became more and more common in their books. As the authors openly advised their readers, this data was not only helpful in allocating resources but also as disciplining devices to insure that the wage-laborers were not “lazy” or “idle” – a persistent problem amongst peasants accustomed to working at a pace determined not by acres per hour but the daily needs of the family or the lord. Thousands of miles away, such productivity calculations of human exertion were emerging in the Caribbean sugar plantations as well, only there the units of capitalized inquiry were not wage-earning peasants but African slaves.⁵²

⁵¹ Walter Blith, *The English Improver Improved* (London: 1653), 3, 120.

⁵² Gervase Markham, *A Way to Get Wealth* (London: 1660) 113. For the disciplining of peasants see Thompson, “Time-Work Discipline.”; On the Caribbean sugar plantations see Mintz, *Sweetness and Power; British Capitalism and Caribbean Slavery: The Legacy of Eric Williams*, ed. Barbara L. Solow, Stanley Engerman (New York: Cambridge University Press, 1987); Arthur Stinchcombe, *Sugar Island Slavery in the Age of Enlightenment: The Political Economy of the Caribbean World* (Princeton: Princeton University Press, 1995).

Adamant supporters of Sir Francis Bacons' empirical methods, these agricultural improvers went on to form the "Hartlib circle," an intellectual meeting group led by Samuel Hartlib devoted to the pursuit of scientific husbandry. Among their members was William Petty, who believed that the English state should be managed by scientific minded gentlemen who expressed themselves in "terms of number, weight and measure," and who "use[d] only arguments of sense, and consider[ed] only such cases as have visible foundations in nature; leaving those that depend upon the mutable minds, opinions and passions of particular men, to the considerations of others." He coined this empirical quantification of English society "political arithmetic."⁵³

Unlike most members of the Hartlib circle, Petty saw himself first and foremost as a political advisor to the King. The primary goal throughout his long quantifying career was to increase national wealth so that the King's tax revenues would also rise. As a result, his statistical focus was not on the single farm but the entire nation. Envisioning England as a total market society in which all the fruit of nature and labor had been sent to the marketplace to be sold, Petty – for the first time in history – measured the wealth of the nation by adding up the monetary values of all the commodities that had been produced and consumed. Observing the goings-on in local markets, Petty estimated that the English people annually spent roughly £40 million on food, housing and other consumable goods. He then divided this "wealth of the nation" in two – that which was produced by land and that which was produced by labor. Turning once again to market relations to quantify the

⁵³ William Petty, *The Economic Writings of Sir William Petty*, ed. Charles Henry Hull (2 vols, Cambridge, 1899), 1: 244. This article was written in 1671. On the relationship between political economy and agricultural capitalism see Appleby, *Economic Thought*, chap 1-2; McNally, *Political Economy*, 35-45; Polanyi, *The Great Transformation*, chap 10. On the effect the Hartlib Circle had on Petty, see T Aspromourgos, "The Invention of the Concept of Social Surplus: Petty in the Hartlib Circle," in *European Journal of the History of Economic Thought* (2005): 1-24.

world around him, Petty argued that the land's contribution to the wealth of England could be calculated by aggregating all the rent payments landholders' received each year. Subtracting this from the £40 million of total wealth he had first calculated, Petty computed that the average English laborer produced roughly seven pence worth of value per day. Capitalizing this income flow over a twenty year span (this is how one capitalized things in the 1600s), Petty set the "value of the people" at £138.⁵⁴

While Petty shifted the statistical focus from the singular farm to the aggregate nation-state, his basic premise remained the same as his colleagues: quantification could help allocate resources, maximize production and discipline the labor force. "Knowing the fertility and capacity of our land," Petty wrote early on, "wee can see whether it hath not produced its utmost through the labors of the people. Wee can see whether plenty makes them lazy, and remedy it. In briefe we can find the best ways and motives to make as many hands as possible to work, and that to the best advantage." By pricing the productive capacity of men, Petty could now, for instance, compute how much potential national wealth had been lost due to the Great Plague of 1665 (£7 million), holidays (£4.5 million per year), or unemployment: "Having shew'd that 340,000 of spare hands are in Ireland," Petty pointed out to the King in one essay "means you are missing out on the wealth of £2,380,000." Petty even priced dinnertime, arguing that if laborers only "dine in one hour and a half, whereas they take two," the wealth of the nation would increase by £200,000.⁵⁵

⁵⁴ Petty, "Verbum Sapienti, and the Value of People," in *Economic Writings*, 1:103-111; this piece was written in 1665.

⁵⁵ Sir William Petty, *The Petty Papers: Some Unpublished Writings of Sir William Petty* (London, 1927); Petty, "The Political Anatomy of Ireland," *Economic Writings*, 147; Petty, "Verbum Sapienti," *Economic Writings*, 110.

Petty did not invent economic quantification. Ever since domesticated animals and farm crops were first counted on Mesopotamian clay tablets over 5000 years ago, the standardized quantification of economic life had been most common throughout ancient and medieval times. A quick glance at economic quantification in feudal England, however, demonstrates just how radical Petty's political arithmetic was. Not long after William I conquered the British isle in 1066, he commissioned a massive survey to discover "what dues he ought to have by the year." The final product was an enormous statistical survey known as the "Domesday Book" for its intimidating ability to settle any political dispute. A typical entry from the Domesday book, regarding a manor in Witshire, looked like this:

Vigot held it [in the time of King Edward] and it paid geld for 5 hides. There is land for 4 ploughs. Of this 2 hides are in demesne. There are 3 villans and 5 bordars and 1 slave with 3 ploughs. There is meadow 6 furlongs long and 2 furlongs broad, and pasture 2 furlongs long and as many broad. It was worth 100 shilling [in the time of King Edward], now 4 pounds.⁵⁶

As the final line in this typical entry indicates, price data was collected in feudal England. But as opposed to Petty's political arithmetic, money prices were not viewed as the central unit through which the world could or should be measured. It was the "hide" - not market prices - that was used to calculate the enormously important land-tax known as the "geld." Deemed the amount of land needed to support a single household, the hide measured the value of land in a quintessentially feudal manner - according to the number of families it could sustain. The Domesday Book was no outlier. Roman common law similarly distinguished between *Quanti venire potest*, ("what the article can be sold for") and *verum pretium*, ("the true price.") Suspicious of the hoarding, manipulating and

⁵⁶ *Saxon Chronicle* from 1075 quoted in David Rowland, *A Manual of the English Constitution* (London, 1859) 31.; *Domesday Book*, ed. Ann Williams and G.H. Martin (London, 2002) 185. For a synthesis of social quantification in antiquity see David Graeber, *Debt: The First 5000 Years* (New York: Melville House, 2010).

asymmetrical bargaining power that often went along with mercantile pursuits and market exchanges, money values were often described in antiquity and medieval times with adjectives such as “arbitrary”, “accidental,” “circumstantial” or “unjust.” As a result, they were rarely used to measure wealth. They simply were not seen as a reliable reflection of value. In equating productivity with income, value with money and the wealth of a nation with the aggregate price value of all commodities produced, Petty pushed prices from the margins of society to the center.⁵⁷

Comparing Petty and the Domesday book also reveals the differences between commodification and capitalization: As the Domesday Book entry indicates, land could be imagined as a commodity in medieval times because it could, while infrequently and inconsistently, be bought or sold – and therefore priced. The annual productivity of land and labor however, could never be priced. As long as feudal peasants could rely on the land for their subsistence and did not need to work for wages, and as long as most of the goods produced were not sold in a market, medieval quantifiers could not measure the amount of money revenue produced by labor and land each year. Land could only be priced as a static good – but not as a dynamic flow. Nature may have been viewed sometimes as a set of alienable commodities worth 20 pounds but it could not be capitalized into an asset that yielded a *future* return of 20 pounds each year. Only in Petty’s mode of quantification did land (and labor) become valued by how much cash they could secrete in the future. Only in Petty’s political arithmetic did the capitalization of everyday life first emerge.

⁵⁷ Nathan Matthews, “The Valuation of Property in the Roman Law,” *Harvard Law Review* 34 (1920-21): 229-259. On the notion of a “just price” as well as skepticism of market values see Thompson, “Moral Economy.” Even Petty did not believe at first that money prices reflected value. On how he came to terms with using market prices as a unit of value see Cook, “The Pricing of Everyday Life.”

First Attempts to Capitalize America

If one were to create a checklist of the economic institutions, state infrastructures, global networks and social relations historians have regularly attributed to capitalist societies, by the 1790s the English empire pretty much had them all - albeit in partial or nascent form: There was a large landless population dependent on wage labor; a smattering of joint-stock companies whose equity was traded on a centralized capital market; a money supply and sovereign debt regulated and managed by privately owned, yet government-chartered, financial institutions; a legal infrastructure whose mission, first and foremost, was the defense of property rights; national markets in which even basic human needs such as grain or clothing had been commoditized and removed from state regulation; a global mass extraction of raw materials on British farms and New World slave plantations; mass-production of these materials into finished goods either domestically “by the piece” or in concentrated factories; and finally, a novel view of the world known as political economy as well as a novel approach to economic quantification known as political arithmetic.⁵⁸

Beginning with his role in founding the Bank of North America in 1781, and ending, more or less, with his failed *Report on Manufacturers* in 1791, if one were to create a checklist of the economic institutions, state infrastructures, global networks and social

⁵⁸ For the intellectual inspirations for this checklist see Christine Desan, "Beyond Commodification: Contract and the Credit-Based World of Modern Capitalism" in *Transformations in American Legal History: Law, Ideology, and Methods: Essays in Honor of Morton J. Horwitz, Volume II*, eds. Daniel W. Hamilton & Alfred L. Brophy (Cambridge, 2010); Bruce Carruthers, *City of Capital: Politics and Markets in the English Financial Revolution* (Princeton: Princeton University Press, 1996); Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Penguin Books, 1986); Douglass C. North and Barry R. Weingast, "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England," *Journal of Economic History*, 49, 803-32; Morton Horwitz, *The Transformation of American Law, 1780-1860* (Cambridge, Mass: Harvard University Press, 1977); Charles Tilly, *Coercion, Capital and European States, 990-1992* (Cambridge: Blackwell, 1992); Barrington Moore, *The Social Origins of Dictatorship and Democracy* (Boston: Beacon Press, 1993); Wallerstein, *Capitalist Agriculture*; Polanyi, *The Great Transformation*; Appleby, *Economic Thought*.

relations Alexander Hamilton tried to establish in the United States during his time as banker, investor, framer of the Constitution and Secretary of the Treasury, the list would look very similar. Hamilton's statistical endeavor therefore cannot, and should not, be separated from his lifelong objective: To capitalize America by transforming the United States into a society where local and foreign investors could safely and profitably invest their capital.⁵⁹

Money, Hamilton argued, when "employed merely as an instrument of exchange" was "dead stock." Only when deposited in banks did it "acquire life, or in other words, an active and productive quality." Similar to Adam Smith's definition of productive and non-productive labor, Hamilton thought that only money which was invested in a manner that led to even more money could be deemed "productive." In transforming otherwise dormant savings into credit lent out to active, profit-seeking entrepreneurs, Hamilton thought financial institutions were by far the most prolific and productive money-makers, enlarging "the mass of industrious and commercial enterprise," and serving as "the nurseries of national wealth."⁶⁰ Small wonder, then, that when Hamilton sought an indicator to measure such national wealth, his experience as a banker led him to adopt a mode of quantification in which productivity was measured solely by monetary yields. If the end result of a human

⁵⁹ Of Hamilton's numerous biographies the ones which go into the most detail regarding his business pursuits and economic views are Forrest McDonald, *Alexander Hamilton: A Biography* (New York: WW Norton, 1979) and Jacob E. Cooke, *Alexander Hamilton: A Biography* (New York: Scribner's, 1982). On Hamilton's desire to shape America in the image of England see Lawrence S. Kaplan, *Alexander Hamilton: Ambivalent Anglophile* (Wilmington, DE: Scholarly Resources Inc., 2002) 79-99; Elkins and McKittrick, *Age of Federalism*, 103, 227-8. While it is impossible to completely trace the origins of Hamilton's capitalizing vision, the fact that he was born and raised on an island of slave plantations might explain why he came to uphold a capitalist value system based on productivity, hierarchy and profit maximization.

⁶⁰ "Second Report on the Further Provision Necessary for Establishing Public Credit," in *Reports of Alexander Hamilton*, 48, 50.

activity was not the creation of monetary revenue, it need not be deemed productive. If you could not count it in dollars and cents, it did not count.⁶¹

This financial vision for quantifying the world dovetailed nicely with Hamilton's attempts to bring factories to the new world. Only a few weeks after Hamilton sent out his statistical inquiries to the revenue inspectors, he asked for numerous other economic statistics from a man named Thomas Lowery. Unlike his two previous letters, however, in this instance Hamilton was acting not as the Secretary of the Treasury but as a private investor. Along with a few other American and European businessmen, Hamilton and assistant treasurer Tench Coxe were subscribers in the Society for Establishing Useful Manufactories (S.U.M.). Their goal was to attract capital and skilled engineers from Europe, charter a corporation, and establish an entire city of textile manufactories somewhere on the eastern seaboard. While the society would end up creating the city of Paterson, New Jersey along the banks of the Passaic River, in the fall of 1791 Hamilton and his fellow investors were still searching for the most advantageous site for their project. Upon Hamilton's request, Lowery, the director of the society, supplied him with "the prices of the sundry articles of provisions, fuel [and] labor" in western New Jersey, noting that "the labor of an able bodied man may be obtained for 15 to 18 pounds per annum."⁶²

Hamilton was in need of such data since his previous official inquiries had only requested information on the annual monetary yields from manufacturing and farming –

⁶¹ For a similar reading of Hamilton's approach to money and banking see Christine Desan, "From Blood to Profit: The Transformation of Value in the American Constitutional Tradition," *Journal of Policy History*, 26 (2008): 26-46. On Hamilton the banker see Bray Hammonds, *Banks and Politics in America from the Revolution to the Civil War* (Princeton: Princeton University Press, 1957) 114-141.

⁶² Lowery to Hamilton, Oct. 14th, 1791 in *Papers of Alexander Hamilton*, ; For S.U.M. see Joseph S. Davis, *Essays in the Earlier History of American Corporations* (Cambridge, Mass 1917), 1:347-522.

but not the initial costs. He had asked for the outputs of the factory and farm, but not the inputs. While Petty, Smith and other classical economists often equated productivity with compensation, Hamilton - like any businessman - did not. He understood that in order to imagine future returns on capital one needed to see within each worker or piece of land *both* their productive potential and their minimum costs - as it was between these two figures where profits lay. A hallmark of how manufacturers viewed the world, textile magnet George Cabot exhibited this very 'double vision' in his response to Hamilton's inquiries, noting that "while our artists have been learning their trades at our expense, their work is now worth more than it costs."⁶³

As revealed in the personal papers of Tench Coxe - Hamilton's business partner, assistant to the Secretary of the Treasury, and kindred ideological spirit - Hamilton was not the only one whose interest in manufacturing led him towards Petty's brand of capitalized political arithmetic. An inside look at Coxe's shifting approach to social quantification allows us to see some of the crucial differences between a commercialist, mercantile worldview and a capitalist one. As a merchant in the 1780s focusing on importing Caribbean crops, the only economic indicators that the young Coxe seemed to care about were commodity prices. "Our present markets are high in the extreme," he noted in a typical correspondence, "rum is 58, sugar 40." Requesting that a British merchant send him a "monthly price current," from which he hoped "to get profitable information," Coxe focused on commodity prices because he knew that his profits were largely dependent on

⁶³ Cabot to Hamilton, Sept 6th, 1791, *PAH*; The notion of a capitalist double vision has been inspired by Walter Johnson, *Soul by Soul: Life Inside the Antebellum Slave Market* (Cambridge: Harvard University Press, 1999); Arghiri Emmanuel, *Unequal Exchange: A Study of Imperialism of Trade* (New York: Monthly Review Press, 1972). The flip side of capitalists' double vision is the practice of unequal exchange. While Emmanuel, Wallerstein and others usually use this term to analyze transactions between nations I find it a fruitful framework to examine capitalist exchange among individuals as well. This distinguishes a capitalist vision from a market one, in which the underlying assumption is that the goal of trade is equivalence not profit.

the arbitrage between commodity markets. Interested solely in commercial exchange between different geographical regions, Coxe the merchant sought only the prices of commodities such as sugar or coffee.⁶⁴

Once Coxe invested in S.U.M and began to move his capital into manufacturing, where one purchased not finished goods but labor power and raw materials, his quantitative focus shifted dramatically. In hopes of calculating the profits which would derive from replacing domestic industry with factory industrialization, Coxe began to seek out data that could price both the costs and productivity of the American household's day-to-day activities. As these numerous data-collecting missions illustrate, and as his work compiling the 1810 census of manufacturing further demonstrates, Coxe was most interested in uncovering the daily costs of maintaining American laborers as well as the estimated revenue of their home manufacturing. Coxe's profit-oriented 'double vision' had moved from coffee to humans. Here we see one of the crucial differences between a commercial worldview and a capitalist one: As a commercial merchant he had skimmed the top of American society, glancing at its fringes but never delving into its core. As a capitalist manufacturer, his statistical gaze led him to examine the very fabric of American life - the potential market productivity of the patriarchal household.⁶⁵

⁶⁴ Coxe to Tennant and Ress Co.(?), November 4th 1778, Coxe to Robert Barclays, February 25th, 1784. Coxe Family Papers, reel 1, microfilm collection. Historical Society of Pennsylvania, Philadelphia, PA. Running two different merchant houses in the 1770s and 1780s, Coxe shifted his attention to land speculation and manufacturing in the early 1790s.

⁶⁵ For Coxe's data collecting as well as his work on the 1810 census see note 39 below as well as Jacob Cooke, "Tench Coxe, Alexander Hamilton, and the Encouragement of American Manufacturers," *The William and Mary Quarterly*, 32 (1975) 370-392. For the notion that there is a fundamental difference between businessmen who buy commodities and businessmen who buy land and raw material see Polanyi, *The Great Transformation*, 42.

Coxe not only began pricing the American family, but the natural resources which sustained it. After he heard that coal had been discovered in Northeastern Pennsylvania, Coxe purchased 80,000 acres in Luzerne County in hopes that this tract could provide the fuel for the American factories of tomorrow. He also took a great interest in the type and value of timber that existed on whatever land he had just bought. The speculative calculations which came to fill the margins of his papers reveal how he began to capitalize his land by estimating how much cash, in the form of coal or timber, he could annually extract in future years. Instead of pricing land according to how much it would fetch today if a yeoman farmer were to purchase it (this is how most land speculators of the era treated their investments in American land) Coxe was pricing land according to how much *future* income he could systematically reap from its raw materials. This was not just an act of commodification, but capitalization. As he began to expand his landed portfolio, Coxe quantified the North Carolina land he had purchased in much the same way. Only this time, instead of coal or timber he turned his focus to a fiber that was just beginning to catch on in the South – cotton.⁶⁶

Coxe, however, not only began capitalizing nature's raw materials but space.

Platting imaginary manufacturing towns on the banks of the Susquehanna River (upon

⁶⁶ For Coxe's voluminous correspondence regarding land investments see Coxe Family Paper, reel 1, *passim*. For letters in which Coxe is fishing for information to price his lands according to future potential income from raw materials, see for example Coxe to Ben Smith, Sept 9th 1785, reel 1, Coxe Family Paper; Coxe to Ephraim Kirby and Sam Law, Jan 16th 1796 reel 63. For Coxe's land investments see also Cooke, *Tench Coxe*, 311-333; Cooke notes that there exist in Coxe's archive "thousands of doodles clearly related to acres acquired and dreamed of, to projected profits, to money owed." (Coxe bought most of the land on credit.) For an example of such a doodle see scrap of paper filled with aggregated land prices titled "Rutherford Lands" and dated 1796 in Coxe Family Paper, reel 63. Coxe's biographers do not focus on his interest in coal. See *History of Luzerne County*, H.C. Bradsby ed. (Chicago, 1893) 300; Coxe, *View of United States*, 70, 180-1. For cotton, see Angela Lakwete, *Inventing the Cotton Gin* (Baltimore, 2003) 36,73-4, Coxe, *View of the United States*, 20, Coxe to Waightstill Avery, January, 1802 and Coxe to Robert Livingston, June, 1802, reel 74, Coxe Family Paper. I believe the temporal emphasis on the future is one of the key distinguishing markers between a mere 'market mentality' and a capitalizing worldview.

which his precious coal deposits sat) became one of his favorite past times. As his papers reveal, Coxe would often attempt to estimate how much he would earn from renting out these lands as future urban lots. Unlike most land speculators of the era, who saw the world through a commercial lens, Coxe's intent was *not* necessarily to resell this land to settlers (although he did that too) but rather to perhaps *retain* ownership and earn consistent future cash revenues from renting space. As with his coal and cotton fields, this wasn't just about making a one-time speculative killing - it was about systematically squeezing sustained future profits from the environment and an emerging manufacturing society.⁶⁷

As mercantile newspapers of the era confirm, unlike Coxe and Hamilton most American merchants continued to show little interest in quantifying the daily actions of American households or the produce of their lands. Their statistical vision remained strictly commercial. Roughly until the opening of the Erie Canal in 1825, the pages of the *New York Commercial Advertiser* contained commodity price lists and money exchange rates – but little other data. With their attention turned to the goods in far flung port cities such as Canton, Marseille, and Havana, even the results of the decennial census were mostly ignored by the mercantile press. On the other hand, the Senate Committee on Commerce and Manufacturers, the Philadelphia Society for the Promotion of American Manufacturers and publications such as Matthew Carey's *The American Museum* and Hezekiah Niles' *Weekly Register* yearned to put price tags on Americans' "internal industry," and "domestic commerce." Serving as the driving forces behind the short-lived

⁶⁷ For Coxe's interest in collecting information on rent see Coxe to Robert Trail, April 3rd 1786, Oct 1, 1789, "Schedule of Penn Land"; Coxe to William Smith, April 12 1792, Coxe to Nathaniel Gorham, Nov 7th 1795, reel 1, Coxe Family Papers. For platting of city lots see plat dated Aug 12, 1815.

manufacturing censuses of 1810 and 1820, these pro-manufacturing forces hoped to succeed where Hamilton had failed by pricing both the costs and productivity of Americans' daily routines.⁶⁸

But back to Hamilton for one final, yet crucial, point regarding his data-collection: Monetized statistics of the American household's costs and productivity were relevant not only to the objectives of Hamilton the banker and Hamilton the manufacturer but Hamilton the Secretary of the Treasury as well. In convincing Congress to convert the American war debt into a permanent sovereign debt that would be financed by issuing government bonds which usually yielded six percent interest, Hamilton had in essence transformed the entire nation into an aggregated capital investment. Having spent much of 1790 and the first half of 1791 poring over tomes of taxation data in order to work out his intricate financing schemes, Hamilton became accustomed to envisioning the productivity of American land and its people as the "revenue of society." Not unlike Petty, the imperatives of a centralized nation-state and the need to estimate the stream of tax revenues that would flow into the state's coffers played an important role in his desire to price the productive resources of the nation.⁶⁹

But whereas Petty priced land and labor in order to maximize tax revenues, Hamilton's decision to fund the permanent debt through capitalists (instead of taxation and

⁶⁸ For the mercantile press of the era see David P. Forsyth, *The Business Press in America*, chapters 1-2 (Philadelphia: Chilton Books, 1965). Examine any issue of the *New York Commercial Advertising* before 1825 to gain a sense of the statistics merchants looked at. For more on this, see chapter 3 on *Hunt's Merchants Magazine*. On Carey and Niles, who shared Hamilton, Coxe and Blodget's capitalizing vision, see Kenneth W. Rowe, *Matthew Carey: A Study in American Economic Development* (PhD diss., Johns Hopkins University, 1933), Richard Stone, *Hezekiah Niles as an Economist* (Baltimore, 1933); Norval Luxon, *Niles' Weekly Register: News Magazine of the Nineteenth Century* (Baton Rouge, LA, 1947).

⁶⁹ For a sample of Hamilton's many calculations on the national debt, see the rough drafts of his first and second reports on public credit that are in his personal papers. As Elkins and McKittrick have noted in regards to the permanent debt, "the taxing power of the United States was being capitalized." Elkins and McKittrick, *Age of Federalism*, 116.

paper money) forced him to put an emphasis not only on efficient resource allocation but profitable returns on capital. He had to ensure that the American economy would be capable of not only returning the principal of the debt but also the additional interest payments. Hamilton didn't need to just balance the budget; he needed to turn money into more money. Similar to the vision required of bankers and manufactures, as the manager of a permanent sovereign debt Hamilton had to tend to the "enhancement of the value of the debt; by giving it a new and additional employment and utility." To be mildly anachronistic for a moment, he needed "economic growth." Not surprisingly, Hamilton thought the best way to do this was by putting the borrowed debt in a bank – a privately owned, yet government-sponsored, national bank. This national bank would funnel bondholders' capital into entrepreneurial projects such as Hamilton's pet project in Paterson, thus increasing the annual cash revenue produced by American society and ensuring that the bondholders would receive their six-percent annual interest. Behind this "financial revolution" of capital flows, bond markets and national bank branches, therefore, lay the same basic imperative as with private finance and manufacturing: If Hamilton were to succeed in transforming America into a good investment, the manner in which man and nature in the United States was utilized, organized and quantified would need to undergo revolutionary social change. This was the profit-maximizing pivot upon which all of Hamilton's grand plans – and statistical vision – turned.⁷⁰

⁷⁰ "Prospectus of the Society for Useful Manufacturers," in *Papers of Alexander Hamilton*; Desan, "From Blood to Profit,"; Elkins and McKittrick, *Age of Federalism*, 118. For a celebratory yet still accurate depiction of Hamilton's work in the treasury department and the "financial revolution" he brought about see Richard Sylla, "Hamilton and the Federalist Financial Revolution, 1789-1794," *The New York Journal of American History*, Vol. 55 (Spring, 2004); Robert E. Wright, *Hamilton Unbound: Finance and the Creation of the America Republic* (Westport CT: Greenwood, 2002); Robert W. Wright, *Financial Founding Fathers: The Men who Made America Rich* (Chicago: Chicago University Press, 2006) 11-26. Unfortunately, this celebratory literature tends to separate Hamilton's financial and manufacturing visions.

Besides Hamilton and Coxe, no one demonstrates the intricate relations between English political arithmetic and American capital investment in this era better than Samuel Blodget Jr. The son of a successful New Hampshire merchant and entrepreneur, Blodget was a man of capital through and through. In 1791 he founded the Boston Tontine Association, a life insurance scheme in which wealthy individuals pooled their capital and received annuities until they died (survivors kept dividing the dead's annuities between them until only one lucky investor remained). When sales soured, Blodget and the other investors used this capital to organize the first joint-stock company in the United States – the Insurance Company of North America. Selling 40,000 shares in only 11 days, Blodget used this windfall to purchase 494 acres of land on a site along the Potomac planned for the nation's future capital – months before the official sale of lots actually began. Throughout the 1790s, Blodget became a fixture in the District of Columbia as he speculated in lots, raised funds through the organization of a lottery and founded the Bank of Columbia. In short, where capital was being raised and investments were being made - you could find Samuel Blodget Jr.⁷¹

An enthusiastic supporter of Hamilton's economic policies at a time when recently elected President Thomas Jefferson was planning to get rid of the permanent national debt and the national bank, in 1801 Blodget published a statistic-filled article titled "thoughts on increasing wealth and national economy of the United States." In the article, Blodget

⁷¹ Blodget left behind few papers. A few illuminating letters can be found in the papers of Thomas Jefferson, George Washington and Blodget's father, Samuel at the Mass Historical Society. On Blodget's business affairs see Marquis James, *Biography of a Business, 1792-1942: Insurance Company of North America* (Indianapolis, 1942); Thomas Harrison Montgomery, *A History of the Insurance Company of North America of Philadelphia* (Philadelphia, 1885), 1-9; W.B. Bryan, *A History of the National Capital from its Foundation Through the Period of the Adoption of the Organic Act* (New York, 1914), 187-226. Blodget was also a mediocre architect. He designed the forgettable First Bank of the United States in Philadelphia.

contended that the American government should in fact take on far more sovereign debt since an increase in the nation's capital stock was "the only requisite to American prosperity and greatness." As with Hamilton, this desire to increase the amount of capital invested in the United States caused Blodget to imagine the American people as money-producing units. He computed that to cover the sovereign debt in 1791 each American had contributed 19 dollars a year to bondholders – which amounted to 19 bushels of wheat or 38 days of labor. Repeating this computation for the year 1800, Blodget calculated that due to an increase in both grain prices and population, the number of days Americans now needed to work in order to pay off the sovereign debt had, in the past decade, dropped to only 12 days a year. Since capital accumulation was not keeping pace with population or prices, Blodget warned, Jefferson should be issuing more bonds – not less. Otherwise, the U.S. would not be maximizing its productive abilities, thus wasting an opportunity to become "the most powerful nation of the universe."⁷²

In 1806, Blodget expanded this argument in his book *Economica* which he published - and possibly wrote - while in debtor's prison. (Apparently, Blodget had miscalculated the amount of investors interested in his lottery and was unable to compensate the winner with the promised \$50,000 prize.) Using, among other charts and tables, a statistical diagram he referred to as the "financial money-meter," Blodget reiterated his argument that American prosperity was dependent on the amount of capital per capita. At the bottom of the meter, one dollar of capital per person meant "extreme distress, universal distrust, government in danger." If one moved up the meter dollar by dollar, as capital flowed into the country, things got rosier and the nation slowly improved from a situation in which

⁷² Samuel Blodget, *Thoughts on Increasing Wealth and National Economy of the United States of America* (City of Washington D.C., 1801).

“idleness abounds” to one where “commerce flourishes, everything improves.” At the highest level of prosperity on the meter, the U.S. finally reached the “average of commercial Europe in 1805” - \$25 of capital per capita.⁷³

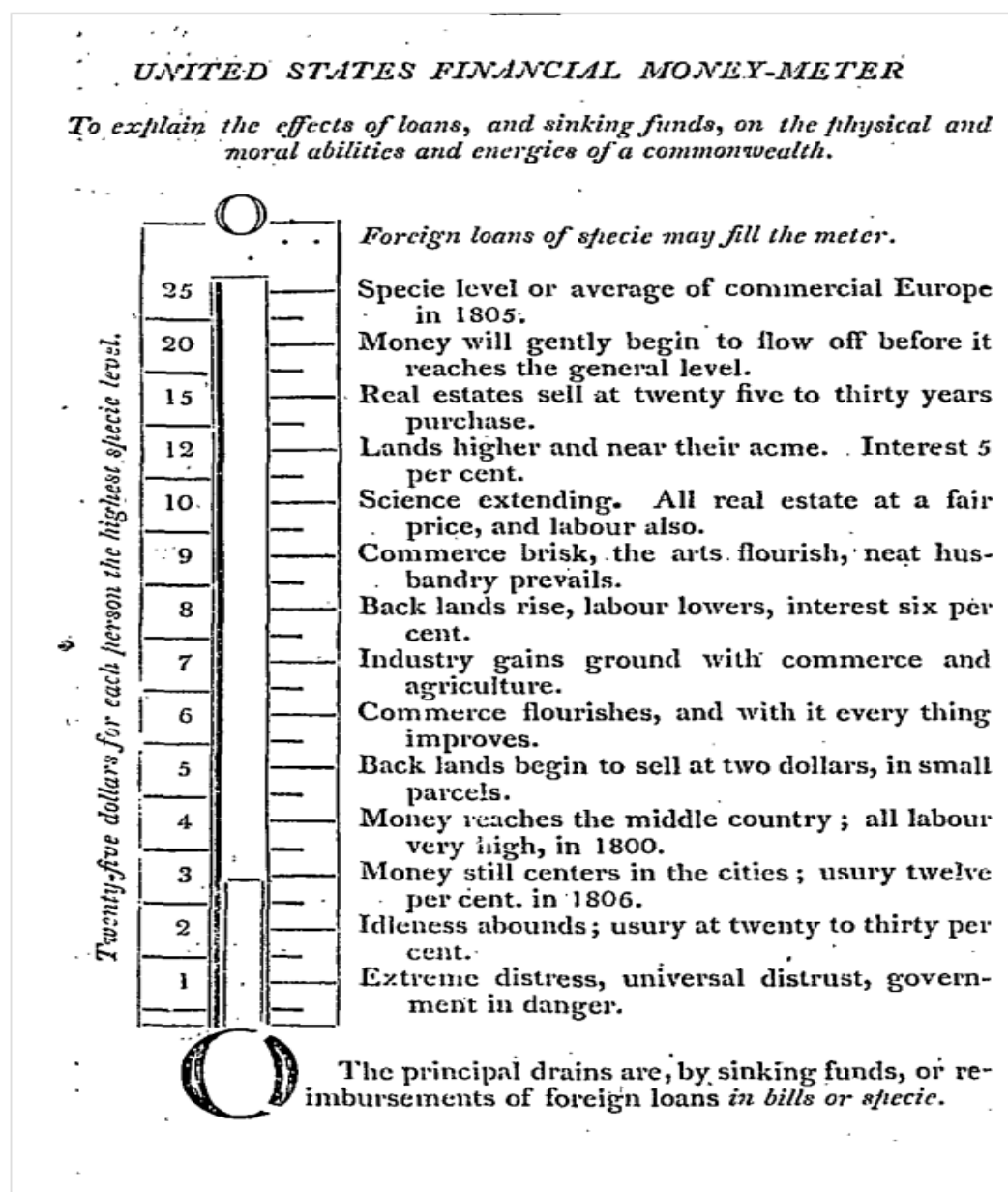


Figure 1: Samuel Blodget's Financial Money Meter. This appears to be the first graphical representation of economic activity in American history. Blodget, *Economica*, 186.

⁷³ Samuel Blodget, *Economica: A Statistical Manual for the United States of America* (Washington D.C., 1806), 80.

To keep track of such economic development, Blodget also implemented many of William Petty's pricing techniques. In one chart, he measured the wealth of the nation by pricing - among other things - American exports, homes, churches, dock yards, timber, slaves, shops, tools, mills, furniture, carriages and animal stock as well as the capital invested in turnpikes, canal, bridges and banks. In another, which cited Petty by name, he priced the American people by capitalizing their productivity. Accepting the racially-tinged tropes of the era, slaves were valued at only \$200 while farmers and free planters were valued at \$400, artisans and professionals at \$500. Just like Petty, Blodget had discovered the magic of money: it could make any two things, be it timber and churches or slaves and artisans, commensurable and thus capable of aggregation. Aggregating the capitalized powers of the American people, he concluded that the wealth of the United States was \$2.8 billion. Over 150 years later, economic historians would credit Blodget for being the American forefather of G.D.P.⁷⁴

⁷⁴ On Blodget as father of GDP see Paul Rohde and Richard Sutch, "Estimates of National Product before 1929," *Historical Statistics of the United States: Millennial Edition Online*.

A TABLE improved on the plan of Sir William Petty, and other statistical writers, for a classing, and a valuation or tariff of exchange, for the whole people of the United States, for 1805.

<i>CLASSES.</i>	<i>Active persons, male and female.</i>	<i>Total Persons U. States.</i>	<i>Esteemed value of each person, in dollars.</i>	<i>Total dollars.</i>
Slaves to planters,	300,000	800,000	200	160,000,000
Do. variously employed,	100,000	200,000	300	60,000,000
Free planters and agriculturalists,	1,200,000	4,800,000	400	1,920,000,000
Mechanical artisans,	100,000	500,000	500	250,000,000
Fishermen, . . .	6,000	30,000	900	27,000,000
Seamen, &c. . .	110,000	400,000	700	280,000,000
Professional and all others not enumerated, .	50,000	250,000	500	125,000,000
	1,866,000	6,180,000		2,822,000,000

Figure 2: Samuel Blodget's pricing of the American people. In order to calculate national wealth, Blodget gave all Americans, not just slaves, a price. Blodget, *Economica*, 89.

Playing the Numbers Game – and Losing

Be it banks, manufacturing enterprises, the sovereign debt, insurance companies, turnpikes, urban land speculation or lotteries, all capitalized projects in America were dependent on two fundamental prerequisites: First, due to the dearth of American capital one needed to persuade foreign investors that the United States was a site of safe and profitable investments. Second, since these projects were dependent on government policies that would, for instance, subsidize domestic manufacturing or provide monopoly privileges for a private national bank, one needed to convince American legislators and the broader public that these endeavors would lead not only to private profit but public good.

Failing in one of these two missions, as Blodget himself knew all too well, led to failed investments and even debtor's prison.⁷⁵

In seventeenth century England, agricultural improvers used poems to convey their arguments. Recognizing the burgeoning rhetorical power of numbers in the late eighteenth century, aspiring entrepreneurs like Hamilton, Coxe and Blodget hoped statistics could help them overcome both America's dearth of capital as well as its republican legislatures. All three businessmen sought out cost and productivity data that would convince rather conservative European financiers that the United States was not a decentralized agrarian republic of self-sufficient farmers incapable of even paying off its war debts, but rather a commodity-producing wonderland teeming with the cheap labor power, abundant natural resources and investment-friendly institutions needed to yield tremendous returns on capital. Most of Coxe's statistical work, for example, appeared in a set of newspaper articles seeking to disprove an English Lord's claim that the British needn't be concerned with the future of American manufacturing. Basing one article on the meager statistical returns he managed to procure from a single village in Virginia, Coxe calculated that the average American family annually produced \$83.5 worth of "home-made hosiery and cloths of wool, flax, hemp and cotton." Hoping to reveal the potential in transforming domestic tasks into private enterprises, Coxe multiplied this revenue by the number of households in the nation and declared that the domestic cloth business was potentially worth \$20 million a year.⁷⁶

⁷⁵ For the dearth of capital in early America see Douglass North, *The Economic Growth of the United States 1790-1860* (New York: Prentice Hall, 1966).

⁷⁶ Tench Coxe, *A Brief Examination of Lord Sheffield's Observations on the Commerce of the United States* (London, 1792); Coxe, *A Statement of the Arts and Manufacturers...1810* (Philadelphia, 1814). For the rhetorical power of numbers during this period see Bruce G. Carruthers and Wendy Nelson Epseland,

Instructed by Congress to ignore domestic production and focus only on “manufacturing establishments,” the 1820 census made it far easier for investors to envision the potential profits which lurked below America’s republican surface. Tabulating the “market value of articles annually manufactured,” the “cost of raw materials annually consumed,” the “amount of capital invested” and the “amount paid actually for wages,” all a foreign investor would have to do is a few calculations in order to estimate each manufacturing establishment’s annual profits and return on capital. Here then was a capitalized worldview in a single statistical table: People and nature as priced inputs of production, market values as the measure of productivity and wealth, and the difference between the two as the profits from which the overall capital return could be deduced.⁷⁷

Dependent not only on foreign capital but domestic government policies for the establishment of their private projects, Hamilton, Coxe, Blodget and other entrepreneurs understood that while this capitalized arithmetic was what the European investor was craving – it would not suffice for the American public. Whether it was Blodget’s financial “money-meter” of human progress or Hamilton’s argument that manufactories would “yield the greatest product” to the American people, they made sure to consistently frame their statistics not only in a calculus of personal profit but in a republican language of public good and overall well-being. Often times, the need to convince legislatures to enact investment-friendly policies served as the driving force behind data collection. The first census of manufacturers in 1810 was established because, following yet another failed

“Accounting for Rationality, Double-Entry Bookkeeping and the Rhetoric of Economic Rationality”, *American Journal of Sociology*, 97 (1991) 31-69; Cohen, *A Calculating People*; Poovey, *The History of the Modern Fact*.

⁷⁷ See abstract of manufacturing tables in Census of the United States, *Digest of Accounts of Manufacturing Establishments* (New York, 1990, 1822c); For the instructions to ignore domestic manufacturing in 1820 see Carroll D. Wright, *The History and Growth of the United States Census* (Washington DC., 1900) 133.

attempt to price the productivity of American manufacturing, Secretary of the Treasury (and manufacturing entrepreneur) Albert Gallatin concluded that “the information which has been obtained is not sufficient to submit...the best plan to protect and promote American manufacturers.” In 1817, the Philadelphia Society for the Promotion of American Manufactures sent out a detailed statistical survey to manufacturers “for the purpose of ... strengthening our applications to the legislatures by the most powerful means - a well digested statement of facts.” Fishing for flattering statistical tidbits they could present to the state legislature, surveyors asked for the “national gain” each manufacturer added to the republic.⁷⁸

Aspiring American capitalists were right to try and use capitalized arithmetic as a medium for attracting foreign investments. Sharing their profit-maximizing vision, European investors were hungry for statistics that would help them make tough global investment decisions. When a Dutch investor who had purchased large tracts of land in America met diplomat John Adams in Europe, he requested specific data on the population growth and settlement patterns in the United States.⁷⁹ Jefferson’s *Notes on the State of Virginia* was written following a request for statistical information on the United States by French consul to the United States Francois Barbe-Marbois.⁸⁰ Economic statistics on American banks, bonds or land prices, as well as data compiled by Coxe, Blodget and the

⁷⁸ United States Congress, House, Committee on Ways and Means, “Report of the Committee of Ways and Means on the memorial of the manufacturers of the city of New York,” 1814; Philadelphia Society for the Promotion of American Manufacturers. Broadside. (Circular), *The Committee Appointed on the Part...to Report a Plan in Aid of the Internal Industry*. (Philadelphia?, 1817).

⁷⁹ On Europeans’ interest in American statistical data see James H. Cassedy, *Demography in Early America: Beginnings of the Statistical Mind, 1600-1800* (Cambridge: Harvard University Press, 1969) 195

⁸⁰ Thomas Jefferson to Count de Montmorin, June 23d 1787, *Writings of Thomas Jefferson*, ed. A.E. Bergh (Washington D.C., 1903) vi, 186.

manufacturing censuses, were featured regularly in business-minded newspapers such as London's *The Morning Chronicle* and *The Liverpool Mercury*. Perhaps most telling of this thirst for American data, however, was the fact that while the statistical responses Hamilton collected in 1791 never made it into his *Report on Manufacturers*, the most detailed answers did end up being compiled into a best-selling London book published in a joint effort by President George Washington and famous English political arithmetician Arthur Young.⁸¹

Despite the demand for such statistics overseas, however, attempts to implement Petty's capitalized arithmetic in the United States ended in almost complete failure. We have already seen how Hamilton failed to collect the data he needed. Coxe, Blodget, Gallatin, promotional societies, newspapers and the manufacturing censuses did not fare much better. When presenting the data he had collected for the 1810 manufacturing census, the head marshal of South Carolina (much like the marshals of Rhode Island, Kentucky, Georgia and Pennsylvania) felt the need to add that the returns were "not more than on half of the real value and that, in general, the manufacturers are much more considerable." Turn to Louisiana's page in the 1820 census a decade later and an indecipherable chart appears. Beneath it, the disgruntled compiler had added a disclaimer: "The above returns are in such a confused state that it is impossible to reduce them to the form required by Congress."⁸²

⁸¹ George Washington, *Letters from his Excellency General Washington to Arthur Young* (London: McMillan, 1801).

⁸² Tench Coxe, *A Statement of the Arts and Manufacturers of the United States* (Philadelphia, 1814) 36; Census of the United States, *Manufacturing Establishments*, 25.

In a rare moment of honest despair even Tench Coxe suggested that “foreigners, who sincerely desire information, take up the Philadelphia directory and learn by this simple but authentic document, the ingredients of which our towns are composed.” Admitting that he “found himself restrained in the statement of facts concerning the United States by the want of that accurate and various information,” in the end the best Coxe could offer the foreign investor was the 1790s version of the yellow pages. Hoping to use the wonders of money to aggregate, abstract and make commensurable the labor of the American people and the resources of American nature, time and again Coxe had to settle for descriptions such as this:

That produce, manufacturers and exports of Pennsylvania are very many and various, viz. wheat, flour, middling, ship=stuff, bran, shorts, ship-bread, white water biscuit, rye, rye flour, Indian corn or maize, Indian meal, buckwheat, buckwheat, meal, bar and pig iron, steel, nail rods, nails, iron hoops, rolled iron tire, gun powder, cannon balls, iron cannon, musquets, ships, boats, oars, handspikes, masts, mingles, wooden hoops, tanners' bark, corn fans, coopers' ware, bricks, coarse earthen or potter' ware, shoes, boots, foal-leather, upper leather, dressed deer and sheep skins, and gloves and garments thereof, fine hats, many common, and a few coarse.

A similarly rambling list of corporeal, tangible, incommensurable *things* appeared in the appendix to Hamilton's *Report on Manufacturers* - precisely where his statistical calculations ought to have been. This was no way to get investors excited about American manufacturing nor did it do much to convince Americans that the country would be better off shifting its productive energies from the home or workshop to the capitalized factory.⁸³

Without proper funding or subsidies, the manufacturing town in Paterson floundered. By the time of his tragic death in 1804, Hamilton had trouble getting investors to pay their installments and the few existing mills closed down. Coxe did not fare much

⁸³ Tench Coxe, *A View of the United States of America* (Philadelphia, 1794), 62, 104, 201.

better elsewhere. Despite purchasing giant tracts of land in Southeastern Pennsylvania that sat upon the largest deposit of anthracite coal in the country, he never succeeded in importing from England the manufactories that would make such an investment profitable. Dying depressed, almost penniless, and in heavy debt, only Coxe's grandchildren would reap the tremendous rewards of his industrializing vision. As for Blodget, he was never really the same after his stint in debtor's prison. As one biographer noted, "his optimism frequently outran his prudence, for which he ultimately paid a heavy price."⁸⁴

As for these men's statistical work, their inability to collect information led to sharp criticism. In an article in the *North American Review* in 1816, Blodget was criticized for being too "speculative" and "deficient in the details." In 1819, Coxe was censured in the pages of the same magazine in much the same way. It likely would have been little consolation for both men to know that their statistical failures should not have been attributed to their own calculating abilities but rather to the fact that the American public simply could not supply them with the data they requested. But *why* exactly did Hamilton, Coxe and other capitalizing entrepreneurs fail to collect the statistics they desired? To answer this question we must turn to the way most American artisans and farmers quantified their material world in the early republic.⁸⁵

⁸⁴ Kenneth Hafertepe "Samuel Blodget," in *American National Biography Online*. On the failure of the SUM see Elkins and McKittrick, *Age of Federalism*, 271, 274, 279-80.

⁸⁵ "Pitkin's Statistical View," in *North American Review*, v. 3 (Sept. 1816) 348-9; "Seybert's Statistical Annals" in *North American Review*, 9 (Sept., 1819): 221.

Chapter Two

Seeing Like a Yeoman: Patriarchal Commercialism in the Early Republic ⁸⁶

It is an undeniable fact that, by the 1790s, the United States was one of the most commodified societies in world history. As the ubiquitous existence of commercial farming, human slavery and land surveys in colonial and early America suggests, the concept that tracts of land, agricultural produce or even human beings were potentially alienable bundles of property rights that could be bought or sold was neither foreign nor abhorrent to the property-owning American farmer or planter. What is more, white American farmers' daily lives were filled with a whirlwind of priced exchanges. In a typical transaction of the era, New Hampshire farmer Matthew Patten was paid two shilling to write a neighbor's will.⁸⁷ Even in barter trades of "book credit," where no actual money was exchanged, men (but not necessarily women) would almost always jot down the money value of each good.⁸⁸ Embracing not only local trade but international export markets, most yeoman landholders would have likely agreed with Massachusetts farmer and almanac author Nathaniel Ames that "we must raise something to sell for exportation, if we

⁸⁶ In this chapter I use the term "yeoman" as shorthand for the land-owning, patriarchal yet still commercially-oriented agrarian household which served as the basic social, cultural and economic unit of American life in colonial times as well as during the early republic. Due to the patriarchal-commercial (rather than capitalist) nature of pre-cotton plantation slavery in America, I would include most southern planters in this category as well. (As Thomas Jefferson effectively demonstrates, even planters with a large amount of slaves often held a "yeoman" worldview.) This chapter will focus mostly on agrarian farmers and planters and not urban artisans because 90 percent of the population in 1800 lived in rural areas. Nevertheless, many historians, including Elizabeth Blackmar, have shown how the artisan household shared many of the "yeoman" traits of the agrarian home. See Elizabeth Blackmar, *Manhattan For Rent: 1785-1850* (Ithaca, NY: Cornell University Press, 1991).

⁸⁷ Matthew Patten, *The Diary of Matthew Patten* (Concord, N.H.: Rumford Printing company, 1903), 354.

⁸⁸ For notion of "book credit" and how Americans priced their dealings even though money did not often exchange hands, see Christopher Clark, *The Roots of Rural Capitalism: Western Massachusetts, 1780-1860* (Ithaca: Cornell University Press, 1990) 32-35. On the gender differences regarding the use of money prices see Laurel Thatcher Ulrich, "Martha Ballard and her Girls," in *Work and Labor in Early America*, ed. Stephen Innes (Chapel Hill: University of North Carolina Press, 1988), 75-86

would increase in wealth.”⁸⁹ Support for such market-making “improvements” as turnpikes and roads was widespread, especially amongst yeomen farmers in staple-growing regions such as Pennsylvania, New York and Maryland.⁹⁰

The two great commoditizers of the early republic were the land survey and the slave auction. The brainchild not of capitalist Hamilton and the Constitution but republican Jefferson and the Northwest Ordinance, land surveys and the cadastral maps they created were a cutting edge form of land commodifying technology. Without their slicing and dicing, there would have been no pricing of the American countryside and its townships. Thanks to these surveys, by the early nineteenth century, land prices would become a hallmark of the American farmer’s statistical imagination. While prices were initially set through government auctions to speculators and settlers (mostly speculators), local property tax assessors insured that as the price of American space fluctuated – and fluctuated it did – updated land values which charted these trends would be available in such popular works as Vermont’s *Alphabetical Atlas*.⁹¹ Whether you were a farmer seeking to purchase more land for your children, a planter hoping to enlarge your growing plantation or a Dutch investor in the Holland Land Company looking to turn a handsome profit, everyone linked to the United States had some stake in land prices. There was, however, no consensus on the direction these land prices should take. Reflecting perhaps

⁸⁹ Nathaniel Ames, *An Astronomical Diary* (Boston, 1766).

⁹⁰ On colonial and early Americans’ embrace of commerce and export markets see McCoy, *The Elusive Republic*; Richard Lyman Bushman, “Markets and Composite Farms in Early America,” *The William and Mary Quarterly*, 55 (1998) 351-7; Rothenberg, *From Marketplaces to Market Economy*; For the south see Gavin Wright, *The Political Economy of the Cotton South: Households, Markets and Wealth in the Nineteenth Century* (New York: Norton, 1978); Alan Kulikoff, *The Agrarian Origins of American Capitalism* (Charlottesville: University of Virginia Press, 1992).

⁹¹ James Dean, *An Alphabetical Atlas or Gazetteer of Vermont* (Montpelier, 1808).

the most burning class conflict of the era, while American settlers seeking to purchase land for themselves or their children preferred land prices to stay low, speculators seeking to get a healthy return on capital naturally hoped they would rise.⁹²

The fact that human beings were being imported to the United States and then sold off to the highest bidder meant they too were being commodified. The slave auction, however, remained largely on the fringes of the American statistical imagination, appearing in local advertisements or planters' account books but rarely in gazetteers or national government reports. Just as with the Constitution, however, while slavery statistics were rarely articulated openly, they always lurked in the shadows. What is more, there existed enough exceptions to this rule to see how ingrained the concept of human commodification was in the minds of not only southerners but northerners as well. Seeking to price American population growth in the 1790s, for instance, a New York newspaper noted that by "calculating the value of each person, in a pecuniary view, only at the price of a negro," one discovered that the nation's wealth was "equal to nearly one hundred million sterling."⁹³

Not only coerced labor was, however, being priced. In the local exchanges that animated the early American countryside, the exchange of labor for money (in the form of book credit) was a daily occurrence as well. In 1806, the town of Oxford, Massachusetts

⁹² For the manner in which the United States sold off its land see Malcolm Rohrbough, *The Land Office Business: The Settlement and Administration of American Public Lands, 1789-1837*. (New York: Oxford University Press, 1968). On the Holland Land Company see Paul Demund Evans, *The Holland Land Company* (Buffalo: Buffalo Historical Society, 1924).

⁹³ *New York Commercial Advertiser*, Aug 2nd 1792;

paid John Mackwell, a local farmer, \$1.58 “for repairing the old School House.”⁹⁴ Maine midwife Martha Ballard received money payments for many of her deliveries and even for shocking stalks for a neighbor.⁹⁵ In order to collectively set their labor rates urban artisanal guilds such as the House Carpenters of Pittsburgh published yearly “books of prices” which priced everything from the cost of grooving door panels to installing circular shutters.⁹⁶

Yet despite the American yeomen’s day-to-day interactions with these varying types of priced exchanges, when Hamilton, Coxe, Washington, Gallatin or the census marshals requested that Americans aggregate and monetize every article that was produced on the farm or in the workshop they could not – as we have seen - supply them with this information. To return momentarily to the opening scene of the previous chapter, we will recall that Americans in the north and south noted “never having kept any regular account of the annual produce of my lands,” that “farming is not yet reduced to a system,” and that while the quantities of goods might be obtained “the value of things” could not.

Not only did heads of American households not record this information they didn’t seem very interested once such data had been collected. A return to the newspapers of the era on the days following the publishing of the 1810 and 1820 manufacturing census reveals neither disdain nor enthusiasm for such statistical endeavors but rather an almost

⁹⁴ Jonathan Prude, *The Coming of Industrial Order: Town and Factory Life in Rural Massachusetts, 1810-1860*; (Cambridge: Cambridge University Press, 1983), 1-34. Mackwell quote on 17.

⁹⁵ Martha Ballard, *The Diary of Martha Ballard, 1785-1812*, 274,296,322. Robert R. McCausland and Cynthia M. McCausland, ed. (Camden, Me: Picton Press, 1992)

⁹⁶ For the exchange of money for labor see Jeanne Boydston, *Home & Work: Housework, Wages, and the Ideology of Labor in the Early Republic* (Oxford: Oxford University Press, 1990), 30-56; *Commercial Advertiser*, February 6th, 1798; House Carpenters of the Borough of Pittsburgh, *The Book of Prices Adopted by the House Carpenters of the Borough of Pittsburgh* (Pittsburgh: S. Engels & Co., 1813). Not enough has been written on the difference between exchanged labor with book credit and wage labor. While Americans often were compensated for labor in book credit or cash, such market transactions lack the institutional nature or power relations of industrial wage labor, as we shall see in later chapters.

complete indifference. Were it not, in fact, for the census marshal who had entered the home to collect this information, most Americans would not have known such a manufacturing census even took place. “At the last census the marshals were required to enter every family,” one Southern Congressman complained in the debates over whether there should be a second census of manufacturers in 1820, “but what benefit was it to the nation?”⁹⁷ It appears that most Americans shared this sentiment. By 1830, the manufacturing census that Hamilton and Coxe had so desired was abolished, largely due to a lack of public interest.⁹⁸

If the patriarchal American farmer, artisan and planter were open to the commercial exchange of labor and land, why didn’t they share Hamilton, Washington, Coxe or Blodget’s capitalizing vision of American society? Why didn’t they know how much cash was annually produced in their households? Why didn’t they want to know the labor costs and productivity rates of their wives, children, slaves, cows and land? Why, as Arthur Young put it, did they “never calculate profit by per centage on capital?” To examine these questions, we must explore how these yeomen farmers viewed the world around them. In doing so, some key distinctions emerge between capitalist and patriarchal-commercial ideology such as the difference between capitalization and commodification, exchange and investment, capital and money, prices and value, businesses and households, capital accumulation and market equivalence.

⁹⁷ *Congressional Globe*, 16th congress, House of Representatives, 922.

⁹⁸ While gazetteers and almanacs made sure to have updated census information on population growth, only pro-manufacturing boosters such as Adam Seybert inserted the results of the manufacturing census into their statistical works. See Adam Seybert, *Statistical Annals* (Philadelphia: Dobson & Son, 1818).

As I hope to make clear, patriarchal planters, farmers and artisans did not reject Hamilton's capitalizing vision because they were pre-modern or anti-market. Yeoman farmers in early America were quite market-oriented. Their account books were filled with cash exchanges and they were very interested in selling some of their produce, land or labor for cash. Nevertheless, this chapter will argue that they were not interested in capitalizing forms of quantification because they did not view the family farm or manufacturing workshop as an income-yielding investment, but rather as their *livelihood*. Both capitalist and yeoman wanted wheat or shoes to be sold and traded in the marketplace, but only investors seeking to calculate their future return on capital needed to know precisely how much money American land and labor could produce in a year. While commercially-oriented, the American farmer, planter or artisan did not see his farm, plantation or workshop as a profit-maximizing enterprise and therefore was not interested in such statistical data. To understand how and why the yeoman and the capitalist counted things differently is to understand the main differences between a "patriarchal-commercial" ideology and a capitalist one. It is also to understand that economic exchange and market orientation alone does not a capitalist society make.

Patriarchal Commercialism vs. Capitalism

One main reason the American yeoman farmer did not bother to keep track of his annual monetary costs or revenue was because much of what was produced in the American household was never sold in the market. As a typical entry in Matthew Patten's diary on the day of the rye harvest demonstrates, any good not exchanged did not get priced:

We carted in 27 stooks and 8 sheaves that we Reapt in this field and in the afternoon I went to James Moors in Goffestown and I got 31/2 Gallon of Rum from him and I gave him a dollar toward it which paid 3 gallon of it.⁹⁹

Treating money, therefore, as the ultimate unit in which material prosperity and productivity should be measured made little sense to Americans as they did not live in the total market society that Petty, Adam Smith, or Hamilton and his fellow entrepreneurs had imagined. Wary that those who lived only by market sales could easily become victims of “the casualties and caprice of customers,” even the most enterprising of Americans did not organize their family household exclusively around commodity-production.¹⁰⁰ Purposely allocating their energies between the market and the household, revenue-maximizing behavior flew in the face of republican notions of proprietary independence. While Americans may have timed the slaughtering of their hogs by responding to price incentives, the notion of shifting all of one’s household production to pig-breeding, for instance, was unthinkable. What is more, with land prices and property taxes relatively low and mortgages rare and rather short-term affairs, American farmers, except for in such moments of liquidity crisis as Shay’s rebellion, were not forced to devote most of their labor to producing a consistent cash flow.¹⁰¹

⁹⁹ Patten, *The Diary of Matthew Patten*, 326.

¹⁰⁰ Thomas Jefferson, *Notes on the State of Virginia* (Paris, 1782), 303

¹⁰¹ For Americans’ unwillingness to fully depend on the market see Clark, *The Roots of Rural Capitalism*, ; Allan Kulikoff, “The Transition to Capitalism in Rural America,” *William and Mary Quarterly*, 3rd series, Vol. 46, No. 1 (Jan., 1989), 120-144; James Henretta, “Families and Farms: Mentalite in Pre-Industrial America,” *The William and Mary Quarterly*, Vol. 35 (1978), 3-32; Michael Merrill, “Cash is Good to Eat: Self-Sufficiency and Exchange in the Rural Economy of the United States,” *Radical History Review* (Winter, 1977), 42-71. For evidence that Americans responded to price incentives see Winifred B. Rothenberg, “The Market and Massachusetts Farmers, 1750-1855,” *Journal of Economic History* 41 (1981): 283-314. While I agree with Rothenberg that Henretta, Merrill and other left-leaning historians have tended to overplay Americans self-sufficient, anti-commercial ways, her demonstration that Americans’ responded to price incentives does not prove that they were profit-maximizing agents nor does it contradict the fact that they preferred not to rely on the market for their daily sustenance. As all neoclassical economists do, Rothenberg anachronistically equates any form of

When American patriarchs did sell their produce to the market or trade labor and supplies with their neighbors on book credit, the main purpose of such exchanges was to procure consumer goods that would improve their household's livelihood. "Commerce!" Ames' almanac exclaimed, "We do thy numerous blessings own, thou bring the fruits of other nations home."¹⁰² Money, therefore, was seen as a means to an end, not an end in itself. As a young Ben Franklin argued, "men have invented MONEY, properly called a medium of exchange because through or by its means labor is exchanged for labor, or one commodity for another."¹⁰³ While Hamilton had referred to such transactional uses of money as unproductive "dead stock" since it did not seek profit, for most Americans the social purpose of money was not the accumulation of capital but the exchange of useful goods. This is why American farmers and artisans loved paper money while investors hated it: The increased money supply greased the wheels of commerce while inflation hurt only those who lent out money for interest or accumulated large cash reserves. This is also why most American farmers did not charge interest on borrowed money – the notion that money itself could somehow create value over time was unacceptable.¹⁰⁴

When Benjamin Franklin, therefore, famously noted that "time was money," he was referring to *labor* time. When capitalist investors charged money for time, on the other hand, they were imagining a very different temporal world, one of opportunity costs.

self-interested behavior with profit-maximization. As I hope this chapter will show, these two concepts must be separated.

¹⁰² Nathaniel Ames, *An Astronomical Diary* (Boston, 1766).

¹⁰³ Benjamin Franklin, *A Modest Enquiry Into the Nature and Necessity of a Paper-Currency* (Philadelphia, 1729) 17.

¹⁰⁴ American farmer's tendencies not to charge interests has been well proven. See for example Clark, *Roots of Rural Capitalism*; Merrill, "Cash is Good to Eat".

According to the capitalists' worldview, time was money because one had to charge interest on loaned out capital since that money could have been accumulating and growing elsewhere, in an *alternative* investment. For capitalists, therefore, the baseline assumption was that money was capital - it should not simply serve as a static medium of market exchange but should rather be "alive" and constantly creating more of itself than had been there before.¹⁰⁵

The fact that Americans did not quantify the world like capitalist profit-maximizers was not due to a disdain for markets but rather an enthusiastic respect for their ability to mete out egalitarian justice. In their eyes, the pursuit of ever-accumulating profit was not the driving force of market exchange, nor could it have been, for the market was built upon the principal of equivalence. Since economic exchange was perceived as a voluntary, self-interested, non-coercive, contractual agreement which occurred only if both sides agreed to it - every transaction had to be more-or-less equal. Otherwise, one of the two exchangers wouldn't have agreed to the deal. Franklin, in expressing this view of market equivalence, noted that "trade in general [was] nothing else but the exchange of labor for labor."¹⁰⁶ Trying to profit from such exchanges, as merchants, speculators or bankers did, was not the work of markets but rather their corruption. This explains the familiar producerist tropes of colonial clergymen's sermons in which merchants, "whose professed aim, as such, is Gain," must not be enabled to "enrich themselves at the ruin of others."¹⁰⁷ The profit-seeking 'double vision' of capitalist investors had no place in the zero-sum game of early

¹⁰⁵ Benjamin Franklin, "Advice to a Young Tradesman, Written by an Old One," in George Fisher, *The American Instructor: or, Young Man's Best Companion* (Philadelphia, 1748), 375.

¹⁰⁶ Franklin, *The Works of Benjamin Franklin*, 385 (1729).

¹⁰⁷ "A Letter from a Gentleman in Rhode Island," *The Weekly Rehearsal*, February 18th, 1734.

American commercialism, where one man's profit was another man's loss. No one made this producerist point clearer than Benjamin Franklin who once explained how "there seem to be but three ways for a nation to acquire wealth. The first is by war, as the Romans did, in plundering their conquered neighbors. This is robbery. The second by commerce, which is generally cheating. The third by agriculture, the only honest way, wherein man receives a real increase of the seed thrown into the ground, in a kind of continual miracle, wrought by the hand of God in his favor, as a reward for his innocent life and his virtuous industry."¹⁰⁸

While Hamilton admired commerce for its ability to maximize material output thanks to an efficient division of labor, yeoman Americans admired commerce for their ability to sustain a republican citizenry of equal, free, white men. Privatizing the notion of civic virtue and pushing it into the realm of exchange, self-interested behavior in this era (often referred to as "self-love") became not only one of the central tenets of American republicanism but the very definition of liberal freedom: Since landed patriarchs need not depend on anyone else for their subsistence, they could choose to transact with other free people at their discretion. Unlike "the multitude of poor without land in a country...who must work for others at low wages or starve," the ownership of land gave men the bargaining power needed to safeguard not only the political realm from corruption but the market as well.¹⁰⁹ While Hamilton, Coxe and Blodget's statistics painstakingly tried to convince white, American men that the key benefit of manufacturing was that it maximized output, they failed to realize that this was not the top priority of the American patriarch.

¹⁰⁸ Franklin, *The Works of Benjamin Franklin*, 4:238. On the zero-sum principal see John Crowley, *This Sheba, Self: The conceptualization of economic life in eighteenth century America* (Baltimore: John Hopkins University Press, 1974); My idea of zero-sumness has been greatly influenced by Jeffrey Sklansky, *The Soul's Economy: Market Society and Selfhood in American Thought, 1820-1920* (Chapel Hill: North Carolina University Press, 2001).

¹⁰⁹ Benjamin Franklin, *The Interest of Great Britain Considered*, 73-74;

“Secure our independence by impoverishing, discouraging and annihilating nine tenths of our sound yeomanry?” Virginian political economist John Taylor, the epitome of patriarchal commercialism, asked in response to Hamilton’s manufacturing scheme. This would turn Americans into “swindlers and dependent on master capitalists for daily bread.”¹¹⁰

While American farmers, artisans and planters did not think that maximizing output was society’s top priority or that prices were the sole unit for measuring productive output (since not all goods went to the market), their belief in the evenhanded mechanism of the market did lead them to believe that money prices were an accurate measure of a natural, intrinsic value. This was why Franklin believed that market exchange was merely trading equal amounts of labor or that “time was money.” While English peasants’ questionable experiences with market-manipulating merchants often caused them to see prices as cynical, circumstantial, coercive and arbitrary measurers of value, Americans’ landed independence led them into the liberal arms of the labor theory of value, as they too came to see prices as a precise reflection of labor value. In his anti-Hamiltonian diatribe titled “Letters to the Yeomanry,” George Logan argued that competition alone established “the just value of every commodity,” and that “a perfectly free trade” ensured “the farmer the highest price for his produce.”¹¹¹ In *The Rights of Man*, Tom Paine rejected government

¹¹⁰ John Taylor, *Arator, Being a Series of Agricultural Essays, Practical and Political* (Petersburg VA, 1818). Republicanism and classical liberalism have many similarities and should not be seen as two utterly conflicting visions of the world. This connection is crucial to understanding, for instance, the later ideology of William Legget and Jacksonian radicals. While Sean Wilentz and other left-leaning historians have tried to downplay this aspect of antebellum radicalism, the classical liberal, free market strain within these men’s work simply cannot be wished away. In this regard, I agree with the consensus school that Americans have always had a strong liberal side to them. Crucially, however, this liberal side must *not* be conflated with capitalist ideology, whose main tenets are not proprietary independence, market equivalence or equality but rather accumulation, efficiency, productivity and growth.

¹¹¹ George Logan, *Letters, Addressed to the Yeomanry of the United States* (Philadelphia, 1791);

regulation of labor rates, and called to “leave [artisans] free to make their own bargains.”¹¹²

While in England an emergent “moral economy” sought the customary and paternalist protection of the Assize of Bread, American farmers were far more trustworthy of the market as they had a bargaining chip English peasants did not - they could always grow their own grain. As we shall see in later chapters, Americans positive experience with decentralized markets would, ironically, eventually play a crucial role in the legitimization not only of fairly equal market relations, but hierarchical capitalist ones as well.¹¹³

Like all political economists of his day, Adam Smith was greatly influenced by William Petty. In *The Wealth of Nations*, however, there is only one direct reference to political arithmetic. “I have no great faith in political arithmetic,” Smith writes.¹¹⁴ This makes sense. Unlike master-planners such as Petty and Hamilton, as the father of laissez-faire liberalism Smith likely distrusted the use of aggregated data as much as he disdained centralized, government planning of the economy. What was the point of collecting all this information when all that was needed to guide society was the “perfect liberty” of self-interested men? While Hamilton referred to the notion of an invisible hand as a “wild, speculative paradox,” most American thinkers, including Thomas Jefferson, tended to side with Smith.¹¹⁵ Here, then, was yet another reason why they rejected Hamilton’s statistical inquiry: While American farmers and artisans were, as we shall see, enamored with certain economic indicators that could allow them to measure the progress of their republican

¹¹² Thomas Paine, *Rights of Man* (Dublin, 1791).

¹¹³ For a good analysis of Paine’s liberal, free market – yet still republican – ideology see Eric Foner, *Tom Paine and Revolutionary America* (Oxford: Oxford University Press, 1976).

¹¹⁴ Adam Smith, *The Wealth of Nations*, book IV, ch. 5; book I, ch. 7.

¹¹⁵ Hamilton quoted in Joyce Appleby, *Capitalism and a New Social Order: The Republican Vision of the 1790s* (New York: New York University Press, 1984) 88.

experiment, few were interested in establishing centralized statistical institutions that could be used by wealthy elites to intervene in their everyday lives through the implementation of protective tariffs, funded debts, chartered banks or subsidized manufacturers.

Furthermore, most Americans farmers and artisans had little need for such statistical data. Even relatively wealthy American farmers and mechanics re-invested nearly all of their savings back into their own household, as they bought another cow, tool or acre of land. Since most Americans were not seeking to place their wealth in capitalized assets they did not directly control, capitalizing statistics was not a crutch they needed to lean on. While investors of capital were subjected to an interdependent society where one could not see or control the economic mechanisms which determined one's wealth, most Americans still lived in relative "island communities" where their propertied independence negated the need for such far-seeing statistics.¹¹⁶

The Segregated Household and the Difference between Property and Capital

Finally, many Americans rejected Hamilton's capitalizing statistical vision because it had made no place for the patriarchal household—only individuals. Just as Petty's pricing of the peasant at seven pence per day had wiped away the Domesday Book's feudal distinctions between "bordars" and "villans," the pricing of Americans as capitalized inputs of labor served as an atomizing force that disentangled people from their webs of social relations. As we clearly saw in Blodget's pricing of the American people, whether a cotton-picking slave, a home-spinning wife, or a free-holding farmer, capitalists imagined

¹¹⁶ On the importance of interdependence in understanding American history see Thomas Haskell, *The Emergence of Professional Social Science: The American Social Science Association and the Nineteenth Century Crisis of Authority* (Urbana: University of Illinois Press, 1977); On the idea of "island communities" see Robert Wiebe, *The Search for Order, 1877-1920* (New York: Hill and Wang, 1967).

everyone the same – they priced them as atomizing units of income. In tearing asunder the basic institution of American society, this statistical vision brought the individualizing culture of capital into the inner workings of the patriarchal household.

This is not how white, American yeomen envisioned their society. Having created propertied, gendered and racialized social and legal barriers they preferred to segregate their wives, slaves and children from what they viewed as the free, self-interested, contractual and equalitarian world of liberal market exchanges. Insulated from market relations, the productive household was to remain hierarchical, coercive and unequal. Instead of money and free bargaining regulating this realm of production, the American yeoman believed that paternalist forms of social relations - be it the ties between husband and wife, master and slave, or artisan and apprentice - should control productive processes. Dividing society between liberal realms of exchange (the market) and hierarchical realms of production (the household) this economic ideology of patriarchal commercialism may appear schizophrenic or hypocritical, but it was neither. With each realm defining the other, the freedom white men experienced in the market was dependent on the power they exacted in the patriarchal household. Often times, the very principals of propertied liberty were best articulated through a denial of such freedoms for women, children and slaves. One reason African American slaves were considered “unvirtuous” was because “while the drudgery is theirs...the profit is entirely ours.”¹¹⁷ By the end of the eighteenth century most male patriarchs did not allow their wives to make any

¹¹⁷ Thomas Bacon, "Second Sermon on Colossians" in *Spreading the Gospel in Colonial Virginia*, Edward L. Bond, ed. (Williamsburg: Lexington Books, 2005).

unsupervised cash transactions nor could they sign contracts. In doing so, they were not only limiting their wives' freedoms, but defining their own.¹¹⁸

Acts of quantification and valuation can help reveal the conceptual segregation of the patriarchal from the commercial in early American society. When entering into a realm of exchange, whether it was the local fair, the mercantile port city or the land office's auctioning block, white men of property often envisioned society in priced, contractual transactions. Rarely, however, did these prices infiltrate into the patriarchal realm of production. As Hamilton grimly discovered, American farmers and artisans simply did not know the aggregate cash value of their family's labor or land and no farmer monetized the costs or productivity of his wife and children or aggregated the revenue of the household.

Even slaves were seen more as patriarchal pieces of household property than priced units of income-yielding capital. It is true that some planters in the early republic kept track of their slaves' market values. A few "enlightened" ones even discounted the opportunity costs from their investments in slaves when completing their double-entry accounts. But until the 1830s, almost none of these planters monetized the annual costs of maintaining slaves nor did they seek to price their annual productivity or even determine their pace of work. This is partly due to the fact that slave-owners in the early republic only sold their slaves in moments of crisis such as death and bankruptcy as they paternalistically considered their slaves a part of their proprietary household. As we shall see, the capitalization of slavery only really took off in the 1820 and 1830s with the cotton boom

¹¹⁸ For the best and most detailed description of patriarchal relations in this era see Alan Kulikoff, *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680-1800* (Chapel Hill: UNC Press, 1986; For the theory that republican independence was dependent on slavery see *American Slavery, American Freedom: The Ordeal of Colonial Virginia* (New York: Norton, 1975). For the non-commercial "Woman's sphere" see Nancy Cott, *The Bonds of Womanhood: "Woman's sphere" in New England, 1780-1835* (New Haven: Yale University Press, 1977).

and the emergence of a widespread, highly liquid market in slaves. In the early republic, therefore, the price of slaves was rarely determined by capitalizing the future revenue stream they would produce. This is why the price of slaves did not rise and fall with the price of tobacco in the 1790s but did rise and fall with the price of cotton in the 1830s. The colonial and early American slave plantations, in short, were still based on the paternal and proprietary tenets of the patriarchal household.¹¹⁹

Livestock and land were quantified in similar ways to slaves. In his response to Hamilton, Pennsylvania farmer Richard Peters priced the value of his cow by capitalizing the annual revenue it would likely produce till it died. This was unheard of in most American farming families where livestock - like slaves - were not imagined as financial instruments. Although tracts of land were commonly viewed as alienable pieces of property that could be bought and sold, they were rarely envisioned as pieces of *capital* that could be inserted into a profit-maximizing equation. As a result, while Americans may have known how much their entire farm was worth on the market, they could not inform Hamilton how much wealth it had annually produced. As with livestock and slaves, there was no ongoing, time-based measurement of productivity. Land remained a static, fixed piece of property rather than being transformed into a dynamic piece of income-yielding capital. Sure enough, when local communities administered their property tax, farms were assessed according to their (very vaguely) estimated market value, not their annual revenue. The same can be said of slaves.

¹¹⁹ On the paternalist relations between master and slave in this era see Kulikoff, *Tobacco and Slaves*; Genovese, *Roll, Jordan, Roll*. Both Kulikoff and Genovese believe that this paternalist relationship continued on until the Civil War. I disagree. This dissertation argues that the internal slave trade, the cotton boom and the capitalization of slaves into financial instruments that could be mortgaged or used as collateral fundamentally altered the relation between master and slave as slaves became capital, not just household property. See chapters 4 and 5 for more on this shift.

The land:labor ratio in the United States played a significant role in the rise of patriarchal commercialism in America as opposed to English-like agrarian capitalism. In England, where labor was abundant and land scarce, laborers were often paid in wages by a farmer who rented the land from the landholder. Rent and wages: It was these two social processes which not only formed the basis of classical political economy but also allowed men such as William Petty and Adam Smith to conceive of labor and land as capitalized investments which secreted an annual flow of cash. When an enterprising investor sought to measure the value of a tract of land in England, for instance, he would come up with the “price of purchase” by calculating the future revenue stream he would receive in annual rents. Such annual rents were only available, of course, because wage workers did not own the fields they reaped.¹²⁰

In the United States, even amongst the wealthiest investors, such capitalization of land was rare. Due to the lack of labor, the best land speculators could usually hope for was to sell the land back to a farmer at an increased price. As eighteenth century Virginia planters knew all too well, getting white men in America to work land they did not own, be it by receiving wages or paying rents, was very difficult. In America, therefore, land remained only a piece of commoditized property, not a capital input. You could perhaps “flip” it for some handsome profits, but you could not continuously “squeeze” annual rent payments out of it. This is why Coxe never hit the proverbial jackpot: While he had hoped to rent his Pennsylvania lots to manufacturers and laborers, or slowly sell off his deposits of coal, in the end all he could do was sell the land to farmers (which, in his grandsons’

¹²⁰ On the land labor ratio and the effect it had on American development see Charles Sellers, *Market Revolution*; Gavin Wright, *Cotton South*. On rent, wages and the relationship between classical economics and English agrarian capitalism see Wallerstein, *Capitalist Agriculture*; McNally, *Political Economy*.

opinion, he smartly refused to do.) This, as historians have convincingly shown, is also one of the main reasons why slavery came to the Americas: Unlike in England, the only way one could systematically control the labor of another in the New World was if one got married, had children or bought slaves. Hiring free, white wage laborers did not work since these men preferred going off and starting their own family farms.¹²¹

Finally, as the disappointing responses which Hamilton received in 1791 reveal, most Americans could not supply him with the information he desired because the bulk of manufacturing was done either by “individuals,” “white females in poor families,” or “under the eye of the mistress...by female slaves.” The common link of all these social activities was that all were considered part of a household (even if it was not your own household.) As a result, these actions were not priced. Coxe and the 1810 manufacturing census marshals ran into similar difficulties. “Carriage makers, blacksmiths, hatters, shoemakers, tailors, domestic makers of garments and other manufacturers known to exist among recent improvers and in old establishments, are omitted, or did not appear to the officers,” Coxe complained to Gallatin.¹²² For Coxe, the notion that such productive behavior could go uncounted or un-priced was unfathomable. For most Americans, the exact opposite was true. A decade later, in the manufacturing census of 1820, the census planners sought to solve this problem by declaring that only data on “manufacturing establishments” would be collected, not “household production.” Instead of lamenting over those things that could

¹²¹ On the need for slave labor due to the inability to hire white men, see Edmund Morgan, *American Freedom*; Gavin Wright, *Cotton South*; Kenneth Stampp, *Peculiar Institution* (New York: Knopf, 195); Sellers, *Market Revolution*. Betsy Blackmar, *Manhattan For Rent*.

¹²² Coxe, *A Statement of the Arts and Manufacturers*, vi.

not be counted, the census leaders had internalized a rule that statisticians, by their very nature, are often forced follow: If you can't count it, ignore it.¹²³

According to this capitalizing statistical approach, if you did not produce money you did not count – or get counted. While this led to a general critique of the yeoman or artisanal household, it put much of the onus for low cash revenues on women's labor. In Hamilton and Coxe's statistical vision, "homespun" domestic work remained statistically invisible as it usually did not produce many saleable commodities. Unsurprisingly, Coxe came to believe that the solution to United States' low productivity rates was to send women to work in the factories where "the time of housewives and young women... could be profitably filled up."¹²⁴ Hamilton wholeheartedly agreed, arguing that the move to the factory would benefit everyone since the patriarch would "experience a new source of profit and support from the increased industry of his wife and daughter".¹²⁵ Perhaps they had been partially influenced by English political arithmetician Arthur Young, who in one of his many statistic-gathering tours of Europe, asked a farmer how the poor, wage laborer's wives and children spent most of their days. "Drinking tea, he replied, and I cannot but remark that I found the custom almost universal." Capitalizing everyday life, it appears, not only led to an erasure of women's labor, but it caused Hamilton, Coxe and Young to

¹²³ For Coxe's erasure of work at home, especially that of women, see Jeanne Boydston, *Home and Work: Housework, Wages and the Ideology of Labor in the Early Republic* (New York: Oxford University Press, 1990).

¹²⁴ Coxe, *View of the United States*, 55.

¹²⁵ Hamilton, "Report on Manufacturers," 129

construct social narratives of the “unproductive housewife” that legitimized such glaring statistical absences.¹²⁶

Measuring Prosperity in Early America

American farmers and artisans in the early republic did have a healthy appetite for statistics. Hungry for information that would enable them to gain a sense of what went on beyond their local “island communities,” even relatively poor farmers often owned at least one book of a statistical nature. The Ball family, for instance, worked a modest farm in the hill country of Vermont and only traveled to Boston once a year to exchange dairy products for some finished goods. Nevertheless, they owned a copy of Jedidiah Morse’s *Geography*, the leading statistical atlas of the early nineteenth century.¹²⁷ Often brandished with titles such as “Picture of New York” or “a Statistical View of Maine,” such works suggested to the reader that through their statistics one could transcend space and catch an objective and disinterested glimpse of the larger world. Before the photograph, there was the statistical gazetteer and farmer’s almanac. With a potpourri of figures that might include the number of school districts or the year when carriages were first used in a town, these statistical “images” could enthrall American readers - but only if the numbers painted a picture that injected meaning into their lives. What Hamilton and Coxe had rudely discovered was that just as Americans did not view the annual cash revenue of their households as an accurate or useful gauge of their family’s prosperity, they did not feel it was a fitting economic indicator for the entire nation either. In their opinion, the goal of the American economy was not to maximize output but to produce and reproduce republican citizens. As a result,

¹²⁶Arthur Young, *A Six Weeks Tour Through the Southern Counties of England and Wales* (London, 1768), 257.

¹²⁷ John Ball, *Autobiography* (Grand Rapids, 1925) , 8.

the statistic yeoman Americans found most conducive to measuring national progress was first population growth and then, by the second decade of the nineteenth century or so, population density.

On the most basic level, population growth symbolized survival. The years following the American Revolution were still a time of potential scarcity and Americans understood that high fertility and low mortality rates, especially amongst children, was evidence that their way of life was not in mortal danger. That said, the multiplication of peoples signified far more than just survival. "People increase," wrote Benjamin Franklin in the first American stab at political arithmetic, "in proportion to the number of marriages, and that is greater in proportion to the ease and convenience of supporting a family." Using local church and municipal records on birth and death rates, Franklin put forth a theory as to why the American people were multiplying so rapidly:

Land being thus plenty in America and so cheap as that a laboring man that understands husbandry can in a short time save money enough to purchase a piece of new land sufficient for a plantation whereon he may subsist a family; such are not afraid to marry; for if they even look far enough forward to consider how their children when grown up are to be provided for, they see that more Land is to be had at rates equally easy, all circumstances considered."¹²⁸

Encapsulated in this one seemingly simplistic statistic of population growth then, was an entire economic worldview. Based not on the tenets of profit maximization but rather social mobility, material equality, generational sustainability and propertied independence, Americans such as Franklin viewed rapid population growth as an effective indicator as to whether the American objective of "competence" – the ability to support a family comfortably without working for others – was being met. Arguing that "the demand

¹²⁸ Benjamin Franklin, "Observations concerning the increase of mankind," in *The Interest of Britain Considered* (London, 1760).

for men, like that for any other commodity, necessarily regulates the production of men,” Adam Smith had credited capitalist accumulation with population expansion.¹²⁹ American statistical sources of the era, on the other hand, shared Franklin’s sentiment, linking demographic growth to the social values of American republicanism. Seeking to elucidate the state’s impressive population explosion, a statistical history of New Hampshire explained that “a young man who has cleared a piece of land, and built a hut for his present accommodation...attaches himself to a female earlier than prudence dictates.” David Ramsay of South Carolina associated population growth with economic and political freedom, noting that American reproduction rates “varied more or less in proportion to the degrees of liberty that were granted to the different provinces.”¹³⁰

As a result, from their inauguration in 1790 the census returns published every decade became a moment to celebrate the American republican project. “Near what are called Middlebury falls, there was but 8 families; now there are 83” one newspaper gushed the day the 1800 census was released, adding that “what is now the center of a flourishing town, was then a hemlock forest.” Charts of population figures were tabulated so that schoolchildren could memorize each state’s population. In what might be the first board game in American history, an 1806 “statistical amusement” required children to learn the population in different counties and towns if they were to win the game.¹³¹

¹²⁹ Smith, *The Wealth of Nations*, Book 1, Ch. 8.

¹³⁰ Jeremy Belknap, *The History of New Hampshire* (Philadelphia: 1784), 178; David Ramsay, *Selections from his Writings* (Philadelphia, American Philosophical Society, 1965) 185; For the notion of earning a “competence” see Merrill, “Cash is Good to Eat,” Clark, *The Roots of Rural Capitalism*, and Henretta, “Families and Farms: Mentalite in Pre-Industrial America.”

¹³¹ “Rapid Growth of Middlebury in Vermont,” *Commercial Advertiser* June 3rd, 1801; *Geographical, Statistical and Political Amusement* (Philadelphia, 1806).

As population figures came to signify prosperity and the public good, they also became a symbol for patriotic pride. Following the very first census, the actual returns were placed in an exhibit hall in Philadelphia for all to see. In the run up to the contentious 1800 election, an engraving was widely circulated in which the sixteen states of the union were depicted around President John Adams with the title “a display of the United States. Below each state’s seal lay a statistic of their respective population. Save for presidential elections, the post office, the flag, Fourth of July celebrations or Hamilton’s dreaded Whiskey Tax, Americans had few national symbols or events which tied the disparate states together. In such a decentralized society, census statistics that enabled Americans to see beyond their local enclaves came to serve as social glue that kept Americans identifying not only with their local town or state, but the entire nation. As Benedict Anderson has argued, the printing press played a key role in the rise of nationalist sentiment as it enabled the invention of “imagined communities.” For Americans, the census served a similar purpose as it helped connect a disjointed United States into a single, coherent statistical community. As a result, people’s identities came to be molded not only by the tangible or the quotidian, but the abstract.¹³²

¹³² D.S. Halacy, *Census: 190 years of counting America* (New York: Elsevier/Nelson books, 1980). *Commercial Advertiser*, June 3rd, 1801; Amos Doolittle, “A New Display of the United States,” *Broadside* (New Haven, 1799). Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 1983).



Figure 3: An engraved portrait of John Adams. In this image, Adams is surrounded by the seals of the sixteen states which all include their exact population and Congressional representation. The image reveals the patriotic and democratic symbolism of population statistics in the early republic. Amos Doolittle, "A New Display of the United States," (New Haven, 1799).

To be sure, yeoman farmers and artisans were not the only Americans who saw population growth as a symbol of American affluence. For the economic elite which had funneled much of their excess capital into land speculation, a rising population had an added bonus: It made them money. Since, as we have seen, wealthy land investors could

not hope to rent out their land, any profits made would be determined by the market for settlers in search of land. As a result, American census statistics were feverishly collected and analyzed by American and foreign land speculators such as Robert Morris, Timothy Pickering and the members of the Holland Land Company. Arguably owning more land west of the Ohio River than any man alive at the time, it is not surprising then that George Washington wished Americans “fulfill the first and great commandment – increase and multiply.”¹³³

Due to a producerist belief in the labor theory of value population statistics were viewed not only as a measure of republican prosperity but also material wellbeing. Whereas English economic thinkers had divided the productive value of society into separate categories according to class relations (rent for landowners, wages for laborers, and profit for capitalists), most Americans spoke only of “the fruits of one’s labor” since the other economic categories did not, and could not, exist in a free-holding slave society where wage labor and land rentals were a rarity.

Such an equation of people and wealth, in fact, was the initial motive behind the establishment of a census. Contrary to conventional wisdom, the census did not emerge out of the Constitution nor was it implemented due to a need for proportionate Congressional representation. Rather, the idea of holding a census was born in the Second Continental Congress of 1783 and was viewed not as a political mechanism but rather as an indicator of state wealth. Unlike in the later Constitutional convention, political representation was not an issue in the Articles of Confederation as it had been determined that each state would

¹³³ George Washington quoted in Henry Nash Smith, *Virgin Land: The American West as Symbol and Myth* (Cambridge, Harvard University Press, 1950), 203. On land speculation in the early republic see Rohrbough, *The Land Office Business*. Evans, *Holland Land Company*.

receive one vote in the Continental Congress. The problem of funding the national war debt, however, was far more complicated. State leaders agreed that the burden of war should be divvied up evenly and therefore each state should be taxed in proportion to its wealth. In 1781, the Articles of Confederation determined that all charges of war be paid “in proportion to the value of all land within each state.”¹³⁴ As the years went by, however, American political leaders began to realize that a land census would be rather difficult to oversee. In 1783, the Continental Congress submitted an amendment to the Articles of Confederation stating that the war debt should be financed “in proportion to the whole number of white and other free citizens and inhabitants, of every ages, sex and condition, including those bound to servitude for a term of years and three-fifths of all other person, except Indians not paying taxes.”¹³⁵

For a man who equated capital accumulation with wealth, Hamilton naturally thought this was a preposterous statistic for measuring wealth. “No man who is acquainted with the State of New York,” he decried in Federalist No. 21, “will doubt that the active wealth of King’s County bears a much greater proportion to that of Montgomery than it would appear to be if we should take either the total value of the lands or the total number of the people as a criterion!”¹³⁶ Although the always prudent James Madison agreed that population growth was “in no case a precise measure” of national wealth he supported its implementation in the Constitution a few years later since it had “obtained the sanction of America.”¹³⁷ In the end, Hamilton did not seem too upset over it being implemented in the

¹³⁴ Articles of Confederation, article VIII.

¹³⁵ U.S. Congress, “Report of the Congressional Committee on the Ninth Census,” (Washington, 1870) 29-33.

¹³⁶ Hamilton, “Federalist No.21,” *Federalist Papers*.

¹³⁷ James Madison, “Federalist No. 54,” *The Federalist Papers*.

to conflicts that got at the core tensions inherent in a system of patriarchal commercialism. For instance, in arguing against the Constitution's three-fifths clause, Southern planter Pierce Butler concluded that slaves should be counted just like whites since the "labor of a slave in South Carolina was as productive and valuable as that of a freeman in Massachusetts."¹³⁸ Notions of productivity were causing slaveholders to begin to envision whites and blacks on an even statistical plane. Recognizing the dangerous ramifications of such an argument, however, the other southern delegates at the constitutional convention did not back Butler up on this matter despite the fact that it would have increased their Congressional representation and thus their political clout.¹³⁹

Enslaved labor was not the only aspect of the American economy that could dampen the celebrations surrounding the census returns. As farmers in New England were coming to recognize as early as the 1770s, a lack of arable land for their increasing offspring was beginning to seriously threaten the future of their republican way of life. One of their greatest fears was that when the United States would run out of land, the newer generations would be forced into factories like in England. "Let us never wish to see our citizens occupied by the work-bench," Jefferson famously noted, as such dependence on others "begets subservience and venality" and "suffocates the germ of virtue."¹⁴⁰ So long as each American man, Franklin argued "can have a piece of land of his own, sufficient by his labor to subsist his family in plenty," he will not be "poor enough to be a manufacturer and

¹³⁸ Butler quoted in Howard A. Ohline, "Republicanism and Slavery: Origins of the Three-Fifths Clause in the United States Constitution, *The William and Mary Quarterly*, vol. 28, no. 4 (Oct, 1971), 570.

¹³⁹ For more on American producerist beliefs see James Huston, *Securing the Fruits of Labor: The American Concept of Wealth Distribution, 1765-1900* (Baton Rouge: Louisiana State University Press, 1998). James Madison, "Federalist No. 54," *The Federalist Papers*.

¹⁴⁰ Jefferson, *Notes on the State of Virginia*, 30.

work for a master.”¹⁴¹ Americans, therefore, began to use a new metric to measure the prosperity of their society - population density. Seen as one of the key ingredients in the four-stage theory of societal development that was all the rage in Europe, population density statistics illustrate how Americans took an economic indicator that already existed and radically altered its cultural meaning to fit American reality.¹⁴²

The conventional wisdom in Europe at that time was that as population density grew, society improved from a state of hunting, to that of pasturage, then agriculture, and finally, at the height of mankind’s progress, manufacturing. The density of population served as an engine for economic progress for a number of reasons: First off, once William Petty had priced the productivity of man at seven pence per day it became only natural to assume that more people meant more wealth. Statements such as “the more populous a country is, the richer it may be,” became truisms.¹⁴³ More importantly, however, English elites realized that a rising population density meant that people would no longer be able to find employment solely on the land. Pushed off the farms and into factories, population growth would not only feed the manufactories’ insatiable demands for labor, but the constant increase in people would insure that wages did not rise. “Numbers of people are the Wealth of a Nation,” one English thinker of the era noted “as where they are plenty, they must work cheap, and so manufacturers are encouraged for a foreign market.”¹⁴⁴ This

¹⁴¹ Benjamin Franklin, *The Works of Benjamin Franklin*, 4:19.

¹⁴² For such models of human progress see Ronald Meek, *Social Science and the Ignoble Savage* (Cambridge, New York: Cambridge University Press, 1976).

¹⁴³ For more on how English mercantilists viewed population growth and wage labor see Edgar Furniss, *The Position of the Laborer in a System of Nationalism* (Boston and New York: Houghton Mifflin, 1920).

¹⁴⁴ English thinker quoted in John Sekora, *Luxury: The Concept in Western Thought, Eden to Smollett* (Baltimore: Johns Hopkins University Press, 1977) 92.

mode of thinking did not pass Hamilton by. In expressing to the other shareholders why New Jersey was the perfect site for their manufacturing town, not only did he note that “provisions are abundant and cheap” but also that the state was “thickly populated.”¹⁴⁵

Most Americans agreed with the inherent logic of this analysis. For them, however, such population density became a sign of an oncoming nightmare – not ongoing progress. Statistics which calculated the number of Americans per square mile began appearing in American statistical gazetteers by the late eighteenth century. Projecting that in a century the rate of inhabitants for every square mile in America would unfortunately reach 100 – the same level as in England - Jefferson used population density statistics to challenge men such as Hamilton and Coxe’s desire to open the floodgates of immigration.¹⁴⁶ Following each decennial release of the census returns, newspapers and gazetteers would often calculate population densities in order to see which states or counties had become “filled” or “universally settled.” What is more, statistical gazetteers such as Daniel Drake’s *View of Cincinnati and Miami County* used population density statistics in an attempt to lure the people of crowded New England to settle out West.¹⁴⁷

For yeoman Americans, in short, the rising density of peoples was not something to embrace but to fear. If this was material progress, they wanted nothing of it. While Adam Smith, Hamilton, Coxe, Blodget and others saw growth as the main goal of human society, Americans farmers began to understand that such developments were not necessarily to their liking. Seeing Europe not as the “Old World” but as the new, Americans came to

¹⁴⁵ “Prospectus of S.U.M.,” *Papers of Alexander Hamilton*.

¹⁴⁶ Jefferson, *Notes on the State of Virginia*, 89.

¹⁴⁷ *Philadelphia City Gazette*, December 22nd, 1804; Daniel Drake, *Natural and Statistical View, or Picture of Cincinnati and the Miami County* (Cincinnati: Looker and Wallace, 1815).

question the very notion of liberal progress and growth. More might not necessarily be better; the future might not necessarily be as bright as the present. To stem the tide of time, Americans feverishly sought to spatially expand westward. With population density statistics serving as their ideological compass, the yeoman farmer shifted his eyes not towards the future, but the frontier.

Conclusions

An analysis of the diverging statistical visions of capitalism and patriarchal commercialism have allowed us to uncover the contradictory ways different groups of Americans perceived the market, the household, women, property, time, money, wealth, the nation, nature, land, freedom and progress. These indicators, however, also help to explain how American political economy developed in the early republic. Hamilton, Coxe, Washington and Blodget's belief that the prosperity of a nation should be measured by the aggregate value of commodities produced caused them to critique the developing political economy of the United States and the notion that the dominant social model should be a spatially expanding nation of yeoman households. Since family farms did not produce exclusively for the market, Hamilton complained that their ongoing westward expansion, "diminishes or obstructs *active* wealth of the country" since it "not only draw(s) off a part of the circulating money and places it in a more passive state, but it diverts into its own channels a portion of that species of labor and industry which would otherwise be employed in furnishing materials for foreign trade." Factories, Hamilton continued, would be far more productive than the American household because "labor employed in agriculture is in a great measure periodical and occasional, depending on the seasons, liable to various and long intermissions; while that occupied in manufactures is constant

and regular, extending through the year, embracing in some instances, night as well as day.”¹⁴⁸ Similarly unhappy with American farmers’ productivity, Blodget noted that while 6,000 fishermen managed to extract “three millions for exportation from the sea” which came to 500 dollars annually, the proceeds from agriculture “never yet furnished 25 dollars a head in any one year.”¹⁴⁹ Tench Coxe tried to assure foreign investors that while it was true that “our planters’ and farmers’ sons are subdividing their lands or moving forward into far less populated scenes,” many immigrant “artificers and manufacturers... are taking their stations on the vacant lots in our old streets.”¹⁵⁰

Such a critique of American society was reiterated by planter George Washington, who quantified his plantation far more like a factory than a farm. In his many correspondences with famed English political arithmetician Arthur Young, who as author and editor of the *Annals of Agriculture* never met a farm he did not price, Washington lamented the fact that most small-scale American farmers did not see the world as wealthy planters did. “The system of agriculture (if the epithet of system can be applied to it),” Washington cynically quipped, “is as unproductive to the practitioners as it is ruinous to the landholders.” Requesting from Young a complete set of his statistic-filled journal, Washington was hopeful, however, that Young’s “annals shall be [the] guide” that in time will help American farmers keep far better accounts of their farming. Not unlike the

¹⁴⁸ Hamilton, “Second Report on the Further Provision Necessary for Establishing Public Credit,” *The Reports of Alexander Hamilton*, 62; Hamilton, “Report on Manufacturers,” *The Reports of Alexander Hamilton*, 121.

¹⁴⁹ Blodget, *Economica*, 91.

¹⁵⁰ Coxe, *View of the United States*, 201.

productivity data he collected on his slaves, Washington hoped that statistics could be used as a disciplining device that would turn family farms into profit-oriented plantations.¹⁵¹

To conclude, statistics did shape the way Americans saw their material world in this period, just not in the ways Hamilton or Washington wanted. While such economic policies as free trade, a minimal sovereign debt and the Louisiana Purchase caused men like Hamilton, Coxe and Blodget to frown, it made patriarchal commercialism's leading economic indicators, such as cheap land prices and low population density, shine. In the first few decades of America's existence, it was this statistical vision that had won the day.

¹⁵¹ Washington, *Letters from General Washington to Arthur Young*, 2-5.

Chapter Three:

Lots of Growth: *Hunt's Merchants' Magazine's* Frontier of Human Capital

For the businessmen of St. Louis, June 19th, 1880 was a date that would live in infamy. That was the day the municipal results of the 1880 census were released and the prominent citizens of the River City discovered that, much to their horror, the population of their fair city had only increased from 310,804 in the 1870 census to 333,570. “The city,” the *St. Louis Post-Dispatch* noted, “is considerably agitated today over the apparent imperfections in the taking of the census.”¹⁵² “The public,” wrote *St. Louis Globe-Democrat* editor Joseph ‘Little Mack’ McCullagh, “seem to have grown somewhat restless concerning the results of the present census...and are beginning to be frightened that the figures will not reach, or at any rate go beyond, 400,000.”¹⁵³ The result, the *Illinois State Register* added, “is alarming to the soul of the average citizen of the ‘Future Great’ and curses loud and deep are escaping the throats of the people.”¹⁵⁴

While these newspapers framed the census results as a crushing blow to “the city,” “the public,” “the average citizen,” and “the people,” in practice only the city’s newspaper editors, merchants, manufacturers, bankers and real estate owners seemed to be upset by this statistical development. One such businessman feared that the census results “will materially depreciate our real estate, and injure the trade and commerce of St. Louis as such an extent as will be felt by all classes of our citizens.”¹⁵⁵ The editor of the *Post-Dispatch*

¹⁵² *Dispatch* quoted in Jeanette C. Lauer and Robert H. Lauer, “St. Louis and the 1880 Census: The Shock of Collective Failure,” *Missouri Historical Review*, 76 (1982).

¹⁵³ *St. Louis Globe-Democrat*, June 19th, 1880.

¹⁵⁴ *Illinois State Register* quoted in *St. Louis Globe-Democrat*, June 22nd, 1880.

¹⁵⁵ *St. Louis Globe-Democrat*, June 19th 1880.

exclaimed that the census was “a libel on our growth”, and warned that St. Louis “will appear as a decaying, retrograding city,” the consequences of which would be disastrous: “It will dishearten our people. It will discourage capital. It will decrease the value of real property and choke up prosperous industries.”¹⁵⁶ McCullagh explained to his readers that the disappointing population count “is not merely a sentimental grievance, it is a blow to the prosperity of St. Louis and to the welfare of every business interest. Our trade, our real estate, our railroads, our municipal and private credit, all are injured by a defective census.”¹⁵⁷

Less than a week later, the St. Louis bourgeoisie were dealt another devastating statistical blow: The results had been tabulated in Chicago, that arch nemesis to the north, and the Windy City had announced that it had surpassed the vaunted half-a-million mark. The businessmen of St. Louis were stunned: This is not how things were supposed to play out for an urban elite which had earnestly believed that continuous population growth would one day lead to St. Louis replacing Washington D.C. as the capital of the nation. Only ten years before, in the census of 1870, they had ranked as the third largest city in the nation. A few months before the 1880 census, the St. Louis papers were still confident enough in their city’s growth to joke that “the newly appointed census taker for St. Louis should understand...that he must beat Chicago or leave town.” After the news of Chicago’s population explosion reached St. Louis, the mood was far more somber. The people of St. Louis, McCullagh decried, had been “hopeful of a showing in population that would cause Chicagoans to rush towards the Lake front with overwhelming unanimity to throw

¹⁵⁶ *Dispatch* quoted in Lauer and Lauer, “St Louis and the 1880 Census.”

¹⁵⁷ St. Louis *Globe-Democrat*, June 20th 1880.

themselves headlong into the water.” Instead it was St. Louis that “must take a back seat for the next ten years.” To make matters even worse, Chicagoans were reveling in their newly found statistical dominance, with Chicago papers arguing that perhaps the discrepancy between St. Louis’ outrageous boasts and their dismal statistical reality was due to a sudden loss of population caused by either death from the city’s stench or a massive migration of residents to Chicago.

A few days after the bad news broke, a group of “prominent citizens” met at the Lindell Hotel to decide what to do about the census. Despite the fact that “the heat in the room was murderous,” the St. Louis hotel was packed with so many commission merchants, local bankers, dry goods wholesalers and other men of business that the crowd spilled into the hallway. As those present shouted out their grievances, a plan was hatched to send a coterie of leading businessmen to Washington to demand a recount from Francis Amasa Walker, the census superintendent. This was only the second census Walker had supervised yet he was already well-versed in these situations. In 1870, he had agreed to administer a recount in New York, Philadelphia and Indianapolis, while countless other cities and towns requesting the same had been denied. Meeting with St. Louis’ leading men in Washington, Walker agreed to call for a recount. After a month of tense waiting and daily coverage by the newspapers the new results finally came in: The census had been off - but barely. Instead of 333,570 people the new census counted 350,518. St Louis’ economic elites were crushed.¹⁵⁸

Since St. Louis’ businessmen seemed to have been genuinely convinced that the initial census results were incorrect, it appears that they were less concerned with the

¹⁵⁸ St. Louis *Globe-Democrat*, June 22nd, 1880; Lauer and Lauer, “St Louis and the 1880 Census. For census recounts see Margo Anderson, *The American Census: A Social History* (New Haven: Yale University Press) 78.

actual population growth of their city and far more with the abstract statistical image the census had produced. From their laments and frustrations, we can also surmise that their panic-stricken reaction to the 1880 census results stemmed from their assumption that a city's perceived population growth had a direct effect on its ability to attract capital. As they noted, a disappointing census return would lead to injured credit, discouraged capital and deprecated real estate. We can also deduce that these population statistics were not serving as some tool that gauged the ability of hardy American pioneers to survive the harsh winters of the Midwest. Despite the rather frantic tone of its businessmen, the city of St. Louis had not undergone some horrific calamity that had decimated the population. It even had grown - just not enough, apparently. No, this was not about survival, it was about business. Why did booming census figures serve as a magnet for attracting investors to a city? What was the connection between population gains and capital gains, human growth and pecuniary growth? In short, what did counting people have to do with counting profits? To answer these questions, this chapter argues that we must travel back a half-century prior to explore the statistic-laden pages of *Hunt's Merchants' Magazine*, the first business periodical in American history.¹⁵⁹

¹⁵⁹ The historiography on the antebellum business press is surprisingly slim. See David P. Forsyth, *The Business Press in America* (Philadelphia: Chilton Books, 1965); Roland Smith, "The Genesis of the Business Press in the United States," *Journal of Marketing*, 19 (1954): 146-151; Elizabeth Hewitt, "Romances of Real Life; or, the Nineteenth-Century American Business Magazine," *American Periodicals*, 20 (2010): 1-22; Freeman Hunt left behind remarkably few letters, which explains why no biography has ever been written. For the little there is on Hunt and his magazine, see Jerome Thomases, "Freeman Hunt's America," *The Mississippi Valley Historical Review*, 30 (Dec. 1943): 395-407; "Freeman Hunt on the Science of Business," *Bulletin of the Business Historical Society*, 18 (Feb. 1944): 9-10. In a telling indication of how previous historians have passed the business press by, Frank Luther Mott's encyclopedic work completely ignores *Hunt's Merchants' Magazine* almost completely. Frank Luther Mott, *A History of American Magazines, 1741-1930* (5 vols., Cambridge, Mass, c1958-1968). Richard Hofstadter takes a quick look at *Hunt's* and argues that as the decades passed, the number of literary articles dwindled and the content became strictly business-oriented. He ends this brief analysis by noting that "a cultural history of the business magazine might be illuminating." As far as I can tell, no historian has yet to take Hofstadter up on his offer. Richard Hofstadter, *Anti-intellectualism in American Life* (New York, 1963), 245-7, 250.

Seeking to rationalize capital investment into a “science of business” following the panic of 1837, this chapter traces how Freeman Hunt’s novel magazine transformed population statistics into an economic indicator that could help his international capitalist readership decide in which western American cities they should purchase urban lots and invest their capital. With the help of a western booster and a southern economist, Hunt inundated his readers with population figures that linked the spatial concentration and reproduction of the American people with future returns on westward-flowing capital. Before *Hunt’s*, businessmen rarely looked at statistics concerning the American people. By the Gilded Age, aggregated body counts could make or break any town, all the while helping to re-imagine the American people as potential sources of profit. Starkly different from the “myths and symbol” narratives of the West previous historians have emphasized, this statistical frontier taught the wealthiest and most powerful men in America and the world to recognize the vast profitability embodied in the labor and material needs of the American people, especially those urban dwellers who often did not own land, their home or productive property. Rather than celebrate the steady, Jeffersonian push of yeoman farmers westward, as Frederick Jackson Turner would later do, *Hunt’s* statistical image of the frontier, which quickly became an ubiquitous presence in American newspapers, extolled urban concentration and landless wage labor – not rural virtue or landed independence.¹⁶⁰

If explored at all, the story of America’s love affair with statistical growth has largely been seen as a twentieth century story. While the abstract and bureaucratic nature of GDP

¹⁶⁰ For the “myth and symbol” school see Henry Nash Smith, *Virgin Land: the American West as Symbol and Myth* (Cambridge, Mass: Harvard University Press, 1950); Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (Oxford: Oxford University Press, 1964).

statistics seems a far cry from the rugged frontier of antebellum America, this chapter argues that *Hunt's Merchants Magazine* played a crucial role in sparking the slow, uneven, and oft-contested process that eventually led market productivity and economic growth to supplant proprietary independence and social equality as the most celebrated values of American life and the ultimate objectives of American society. Only unlike the abstract economic growth figures of today, which aggregate the prices of all commodities produced and consumed, the first growth statistics in America were, quite literally, far more corporeal: They did not count money; they counted bodies.¹⁶¹

Freeman Hunt and the Capitalizing of Urban Space

Whilst working as a young reporter for the *American Traveler* in 1836, Freeman Hunt decided to take a tour of the Hudson River and send back to his editor “plain, matter-of-fact epistles” on the region. In his first letter back to the editor, Hunt began not by describing the city of Poughkeepsie and its surroundings, but by pricing it. “The gross products of the country, from its soil, its mines, and its manufactories,” Hunt noted, “are believed by persons qualified to judge, to approach five million dollars a year.” Hunt’s statistical narrative quickly got swept up in the speculative fever of the times. “Lots which were sold eighteen months ago for 600 dollars have been sold for 4000 dollars,” he wrote with exuberance, “while a farm in the vicinity, which was offered twenty months ago for 22,000 has lately been sold for 68,000 dollars.”¹⁶²

¹⁶¹ For the literature on American economic growth in the twentieth century see Robert M. Collins, *More: The Politics of Economic Growth in Postwar America* (Oxford: Oxford University Press, 2000); Andrew Yarrow, *Measuring America: How Economic Growth Came to Define American Greatness in the Late Twentieth Century* (Amherst: Massachusetts University Press, 2011).

¹⁶² Freeman Hunt, *Letters about the Hudson River and its Vicinity* (New York, 1836) 1, 12, 13-14; Hunt’s letters were so popular he published them in book form.

Most travelers' literature of the era read nothing like this. *The Fashionable Tour in 1825* described Poughkeepsie simply by noting that "the village is about the same size of Newburgh, handsomely located, and a place of considerable trade." It did not list land values or gross products but rather spoke of "the sublime and romantic scenery" of the Hudson River valley.¹⁶³ Hunt's letters replaced romanticism with numbers - even on the seemingly most romantic of subjects. "If you have any young men in your goodly city in want of wives...some of the fair are certainly very beautiful," he reported. "I advise you to send them forthwith...as there are in the village, according to a census just completed, one thousand one hundred and thirteen unmarried young ladies."¹⁶⁴

Self-conscious of his statistical ramblings, however, Hunt made a point to explain to his editor the reasoning behind his unique writing style. "I consider the general diffusion of the statistical, commercial and geographical knowledge of interesting portions of our widespread republic," he wrote, "of vast importance to enterprising Yankees." On this trip along the Hudson River, Hunt had discovered his life's calling: To assist American businessmen and financiers in their search for profits by serving them a healthy dose of facts, figures and charts.¹⁶⁵

It would take Hunt only three more years to transform this vision into reality. In 1839 he began publishing *Hunt's Merchants' Magazine*, a monthly periodical whose mission it was to supply American businessmen with all the information they needed to capture

¹⁶³ Gideon Miner Davison, *The Fashionable Tour in 1825: An Excursion to the Springs, Niagara, Quebec and Boston* (Saratoga Springs, 1825) 40.

¹⁶⁴ Hunt, *Letters about the Hudson*, 19; On the fashionable tour literature of the era see Richard H. Gassan, *The Birth of American Tourism: New York, the Hudson Valley, and American Culture, 1790-1830* (Amherst: Massachusetts University Press, 2008), 73-77.

¹⁶⁵ Hunt, *Letters about the Hudson*, 15.

new markets, assess their real-estate holdings, take advantage of novel financial instruments such as railroad securities or manufacturing stock, and, in short, maximize their profits. In the following two decades that ended with Civil War and Hunt's untimely death (according to the *New York Times* obituary he had a "foible for the drink"), the *Merchants' Magazine* became the journal no serious investor in America or Europe could afford not to read. And at the heart of this periodical lay not colorful anecdotes or moralistic catechisms, but statistical reports.¹⁶⁶

The fact that Freeman Hunt's career began by visiting towns along the Hudson River is no coincidence. The Erie Canal, which had opened a decade prior and connected the Hudson to upstate New York and the Great Lakes, changed many things in America - including capital investment patterns. Until the canal opening, most eastern businessmen were merchants who focused on international imports and exports. Besides government bonds or the occasional short-term speculation in agricultural lands, the profits merchants earned were plowed back into further mercantile pursuits. Even when investing in bank stocks, a common practice amongst east coast merchants following the bank boom of the early 1800s, American capitalists were essentially still funneling their cash into mercantile endeavors since nearly all the money loaned out by the notoriously conservative banks of early America was in the form of 60 or 90-day "commercial paper" intended for merchants.¹⁶⁷

¹⁶⁶ *New York Times*, March 4th, 1858

¹⁶⁷ On the international and mercantile nature of early American capital investment see Thomas M. Doerflinger, *Merchants and Economic Development in Revolutionary Philadelphia* (Chapel Hill: University of North Carolina Press, 2001) 304-327; Douglass C. North, *The Economic Growth of the United States, 1790-1860* (New York: Prentice-Hall, 1966); Robert Albion, *The Rise of New York Port* (Boston: David & Charles, 1970). On the mercantile banking of the era see Bray Hammond, *Banks and Politics in America From the Revolution to the Civil War* (Princeton: Princeton University Press, 1957); John Denis Haeger, *The Investment*

The main reason early American businessmen invested mostly in mercantile trade was because they had few other options. Due to an assortment of reasons such as the abundance of cheap land, the dearth of cheap labor and the Republican desire to own productive property, American attempts to capitalize labor and land into a profitable investment as in England - that is by reaping consistent returns from tenant farming or wage-labor manufacturing – usually failed. Save for a few large-scale manufacturing enterprises in New England, capitalization of land and labor took hold only in the South, where planters were willing and able to enslave African Americans in order to transform staple farming into a capitalist enterprise that could yield a steady return on one's investment in land and labor. In the north, both manufacturing and farming remained small, proprietary endeavors in which a wealthy capitalist could not directly invest, let alone profit. By the time Hunt took his tour of the Hudson River in 1836, however, the Erie Canal had triggered a sea change in the political economy of the north as millions of dollars in east coast and European capital had begun to flow westward into revolutionary new channels which included western banks, government canal bonds, farmer mortgages and urban space. For our purposes in this chapter, it is the latter that we must examine further.¹⁶⁸

Frontier: New York Businessmen and the Economic Development of the Old Northwest (Albany: State University of New York Press, 1981).

¹⁶⁸ On the failure of the north to capitalize agriculture as opposed to the South see Gavin Wright, *The Political Economy of the Cotton South: Households, Markets and Wealth in the Nineteenth Century* (New York: Norton 1978). On the effects of a high land:labor ratio in early America see Charles Sellers, *The Market Revolution: Jacksonian America, 1815-1846* (New York, 1991). For a good overview on the proprietary nature of manufacturing in early America see Walter Licht, *Industrializing America: the Nineteenth Century* (Baltimore: John Hopkins University Press, 1995). Chapter 5 examines the investment in canal and railroad bonds and stock. On the impact that the Erie Canal had on American economic development see Albion, *New York Port*; Robert Fogel, *Railroads and American Economic Growth* (Baltimore: Johns Hopkins Press, 1964); George Taylor, *The Transportation Revolution: 1815-1860* (New York: Holt, Rinehart and Winston, 1951).

Cities are many things, but one way to characterize them would be to say that they are densely populated spaces in which, due to their concentrated nature, most residents own little or no land. This is how most yeoman farmers in early America viewed cities. With no land to make man virtuous and independent, cities were condemned as sites of “loitering” and “licentiousness.” The widespread success of the yeoman political economy of landed independence in the first quarter of the nineteenth century, therefore, is reflected in the “scattered” spatial distribution of the American people: In 1820, only 6.7 percent of Americans lived in towns with over 8,000 people, and there were only 26 such cities. (By the 1880 there would be 286). The shift to widespread investments in urban space first began in large port cities such as New York City.

As Elizabeth Blackmar has illustrated, by the early nineteenth century housing was slowly becoming a capitalized investment in Manhattan as the thriving international port transformed the city into a bustling metropolis that required a large influx of porters, clerks, retailers, merchants, sailors, artisans, wholesalers and domestic servants. In colonial times, Blackmar explains, artisan-builders had “created their product for a known customer” in “a local economy of simple commodity exchange.” In other words, the person who wanted a building hired someone to build it. Housing was commodified in colonial New York – you paid someone to build you an alienable structure you could then use as your home or sell to someone else – but it was not a capitalized, income-yielding investment. By the early nineteenth century, as Blackmar documents, this began to change with the emergence of “speculative building” – a practice in which entrepreneurs built numerous houses even though they did not have a known seller nor did they intend to live in the homes themselves. “What determined [this] new construction,” Blackmar explains,

“was not the social need for housing but the rate and security of profits.”¹⁶⁹ Few exemplify this critical shift in investment behavior better than John Jacob Astor. While Astor had begun as a merchant and made his fortune in the fur trade, by the 1830s he was one of the largest rentiers in New York City. For the first time in American history, capitalists were succeeding in turning urban space into a steady, income-yielding investment.¹⁷⁰

Astor and other rent-seeking speculators could profit nicely from urban space because the Erie Canal, having only one endpoint, had created spatial scarcity. Anyone who wanted to gain from the canals ability to cheaply ship or receive goods would have to pay dearly for spatial access to this unique service. In classical economics such an increase in the value of property solely due to its relative scarcity is called rent. (Earning rent from housing is, therefore, one form of rent in which the scare property happens to be space itself.). Whether the urban lots purchased by capitalists such as Astor were destined to become a warehouse, depot, dock, wholesale shop, retail market, lumber mill, factory, hotel or residential home made little difference – the canals’ ability to turn unremarkable slices of land into scarce resources allowed for profitable, rent-seeking investments. When New York real-estate mogul Samuel Ruggles agreed to sell five of his many houses on Third Avenue to a man by the name of Henry Betts, the capitalization of urban space by rent became tangible for it was precisely this rent that set the capitalized value of the buildings. As the contract signed by both men illustrates, Betts had agreed to purchase the lot for

¹⁶⁹ Blackmar, *Manhattan for Rent*, 184-189.

¹⁷⁰ For the importance of urban real estate as a new source of capitalist investment in this era see Thomas C Cochran, “The Entrepreneur in American Capital Formation,” *Capital Formation and Economic Growth*. (Princeton University Press, 1955) 337-394. On Astor see Kenneth Porter Wiggins, *John Jacob Astor, Business Man* (New York: Russell & Russell, 1966 [c1931]; John Haeger, *John Jacob Astor: Business and Finance in the Early Republic* (Detroit: Wayne State University, 1991); Another major real estate developer of the age was Samuel Ruggles. See Daniel Thompson, *Ruggles of New York: A Life of Samuel E. Ruggles* (New York: Columbia University Press, 1946).

\$22,500 dollars largely because Ruggles had promised him that he could earn \$2000 dollars in annual rental fees. (At this rate Betts would earn back his money in roughly ten years and double it in twenty. This was a common “purchasing price” for capitalist space in the era.)¹⁷¹

This rent-seeking spatial logic worked not only for canal endpoints, but the entire canal corridor. As a result, even before the Erie Canal had moved a single bushel of wheat the urban real estate business was booming not only in New York City but in urban lots from Buffalo to Brooklyn. By the time states such as Illinois and Ohio began planning their own canals to the Great Lakes in the 1820s, eastern investors were even more willing to funnel massive amounts of capital into potential cities along these future canal routes.¹⁷² While in the east urban investment often meant constructing new buildings, in the west it meant constructing whole towns – at least on paper. After purchasing a swath of land with supposedly wonderful urban potential, investors would “plat” a city by drawing a map that divided the “town” into lots. Similar to the process of cadastral land surveying, once the plat had been drawn space could become a commodity (but not necessarily capital –that required the ability to extract steady, profitable rent). Using the plats as their guides, investors could buy or sell urban lots at will - and buy and sell they did. Thanks to the canal frenzy, lots in Chicago that had sold for \$33 dollars in 1829 went for \$100,000 in 1833. As these skyrocketing prices attest, within less than a decade investment in urban space went

¹⁷¹ Samuel Ruggles Papers, New York Public Library, Folder 21.

¹⁷² On the link between the canals and the rampant land speculation of the 1830s see Haeger, *Investment Frontier*; Harry Scheiber, *Ohio Canal Era: A Case Study of Government and the Economy, 1820-1861* (Athens: Ohio University Press, 1968); Ernest Bogart, *Internal Improvements and State Debt in Ohio* (New York: Longmans, Green and Co., 1924); William Roy, *Socializing Capital: The Rise of the Large Industrial Corporation in America* (Princeton: Princeton University Press, 1997); Carter Goodrich, *Government Promotion of American Canals and Railroads: 1800-1890* (New York: Greenwood, 1974).

from being a novel curiosity to an everyday event. Indicating how mainstream the investment in urban space was becoming, even previously conservative mercantile banks became far more willing to accept an undeveloped town lot as a security for a mortgage that would go to finance urban construction. With the bankers' stamp of approval, urban space had officially been capitalized.¹⁷³

The Science of Business

Freeman Hunt's entrepreneurial instincts kicked in after his Hudson River letters were warmly received by Boston and New York's economic elites. By 1837 he had devised a plan to edit and publish a monthly magazine intended specifically for capitalist investors. In 1838, he visited the New York Mercantile Association, an exclusive club for the economic elite of the city, in order to make his pitch. "There is at present no work to which the merchant can refer for a record of many facts that might be important aids to him," Hunt told his audience. "Besides the information which he gathers from the columns of newspapers....there is a great deal to be collected from the Statistics of Commerce." The board of directors of the New York Mercantile Library Association voted unanimously to "lend an individual and united support in recommending [Hunt's magazine] to public patronage; and further that it may be as far as practicable the organ of this association."¹⁷⁴

Their enthusiasm was not surprising, as American capitalists were hungry for data to help them manage this brave new investment frontier. Arthur Bronson, one of the biggest investors in urban lots in the country and a member of the New York Mercantile

¹⁷³ For eastern investments in western cities see Haeger, *The Investment Frontier: New York Businessmen*; William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York, 1992), 28-32; Leslie Decker, "The Great Speculation," in David M. Ellis, ed., *The Frontier in American Development* (Ithaca, N.Y., 1970), 364-8; Paul W. Gates, "Frontier Land Business in Wisconsin," *The Wisconsin Magazine of History*, 52 (Summer, 1969).

¹⁷⁴ "Proposals for publishing a monthly periodical, to be called the Merchants' Magazine and Commercial Review," *American broadsides and ephemera. Series 1* ; no. 5313.; Freeman Hunt, *Hunt's Merchants Magazine* 1 (1892): 192.

Association, always tried to find statistical information to help him make investment decisions. Yet when he set out for his western reconnaissance mission in 1833 to purchase urban lots, he had only a farmer's "emigrant guide" at his disposal. While these books were sufficient for the yeoman farmer looking for a place to settle, their lack of statistical detail was a liability for the eastern capitalist looking for a place to invest. As a result, Bronson and his partner Charles Butler often were forced to estimate the population of the villages they visited by counting how many children were in the local school. With such a dearth of data, it is not surprising that stories abounded of investors who had purchased lots in towns they thought had buildings, paved streets and hundreds of residents but in reality did not even exist except in one convincing booster's dreams.¹⁷⁵

The year 1839, of course, shared little resemblance to the year 1836 - when Hunt's first travel articles were published. The rampant investment in city lots that characterized the roaring 1830s came to a crashing halt with the panic of 1837. Unlike most business ventures, however, the panic was a boon for Hunt as he played on businessmen's trauma from 1837. Stressing the need for a rationalized system of capital investment, he warned that "operations are often begun in a reckless spirit of speculation, and end, as might have been anticipated, in defeat, simply because some piece of information essential to the adventure, had, in the ardor of pursuit, been disregarded."¹⁷⁶ Chiding previous commercial newspapers with providing only "ephemeral accounts of the state of trade," Hunt later proclaimed that the magazine's goal had been to "construct the Science of Business" by

¹⁷⁵ See Butler's diary of his and Bronson's 1833 trip in Charles Butler Papers, Library of Congress. For capitalist's desire for more and more economic knowledge in this era see Michael Zakim, "Producing Capitalism," in *Capitalism Takes Command*, ed. Michael Zakim and Gary Kornblith (Chicago: Chicago University Press, 2011).

¹⁷⁶ Freeman Hunt, *Hunt's Merchants Magazine*, 1 (1839): 1.

supplying the merchant with a diverse array of articles and statistics on “the study of the resources of nations, Commercial Geography, the processes of production, and the Laws of Wealth, or Political Economy.” It was, therefore, out of the ruins of the 1837 panic that Hunt’s statistical frontier would arise.¹⁷⁷

Turning business into a science, however, was not the sole purpose of Hunt’s magazine. He repeatedly reminded his readers that until his magazine appeared on the scene “there was not a single magazine...to represent and to advocate the claims of Commerce.”¹⁷⁸ Besides statistics and other data-laden articles, *Hunt’s* extolled the general prosperity brought on by American businessmen, reminding his readers that “next to religion,” business was the most “active principle of civilization, of knowledge and refinement,” and “liberty has always followed in its steps.”¹⁷⁹ Either in the pages of the magazine itself or in special supplements, subscribers to *Hunt’s* often were presented with hagiographic accounts of the lives of leading merchants written by Hunt himself. Decades before Haratio Alger, Hunt mastered the narrative of the self-made man - despite the uncomfortable fact that most of the American capitalists he chose to write about, such as Edward Everett and Amos Lawrence, were from the wealthiest families in America. In an era when producerist sentiments still held a central place in everyday political and economic thought, *Hunt’s* stood as an unprecedented bastion of capitalist legitimacy. “In

¹⁷⁷ Hunt cited in “Freeman Hunt on the Science Business,” 9-10. For urban speculation and the Panic of 1837 see Patrick McLear, “Speculation, Promotion, and the Panic of 1837 in Chicago,” *Journal of the Illinois State Historical Society*, 62 (Summer, 1969) 135-146; Peter Temin, *The Jacksonian Economy* (New York: Norton, 1969); Jessica Lepler, “1837: Anatomy of a Panic” (PhD Diss., Brandeis University, 2008).

¹⁷⁸ Hunt, *Hunt’s Merchants Magazine* 21 (1849): 143.

¹⁷⁹ Freeman Hunt, “The Moral End of Business,” *Hunt’s Merchants Magazine* 1 (1839): 390; On Hunt’s linking of commercial values to social values see Jerome Thomases, “Freeman Hunt’s America,” *The Mississippi Valley Historical Review*, 30 (1943), 395-407.

society at large,” Hunt once noted with remarkable candor, “gradations of social position are measured by stock-certificates, rent-rolls and bank-accounts.”¹⁸⁰ Rarely had previous American generations written so unabashedly about the virtues of capital investment. At a time when American elites were coming to view themselves not as genteel aristocrats but an enterprising bourgeoisie, *Hunt’s* led the way.

Hunt’s novelty was also in that it was the first business-related journal to be of national scope both in its content and its distribution. Even the *Economist*, the British equivalent of *Hunt’s*, was only founded in 1843. Before *Hunt’s*, newspapers that covered important events in the business world were either local affairs, read mostly by the businessmen in the respective town they were printed in, or specialized papers meant only for certain types of businessmen. As a nationally distributed paper which covered not only mercantile issues but also such business interests as manufacturing, railroads, mining and land speculation, *Hunt’s* quickly became a forum where men from different regions and trades could unite together, under the banner of business, and share information. Do not, therefore, let the word “merchant” in the title of Hunt’s magazine deceive: As Phillip Foner has noted, by mid-nineteenth century New York “bankers, capitalists, brokers, commercial lawyers, railroad speculators and manufacturers referred to themselves as merchants”. As is often is the case in moments of great social transformation, Hunt continued to use terms such as ‘commerce’ and ‘merchant,’ even though the meanings of such words were rapidly undergoing revolutionary change.¹⁸¹

¹⁸⁰ Freeman Hunt, *Maxims, Morals, and Miscellanies* (New York, 1856) 106.

¹⁸¹ Philip S. Foner, *Business and Slavery: The New York Merchants and the Irrepressible Conflict* (Chapel Hill: North Carolina Univeristy Press, 1941) vii.

Envisioning that his magazine would “form a connecting chain and become the repository of the various mercantile associations throughout the country,” Hunt recognized the potential his magazine had as a bridge that could help connect disparate men of business. Indeed, by the end of the 1840s Hunt’s self-conscious effort at class formation had borne fruit as all the most important Mercantile Library Associations of the nation, including the branches in New York, Philadelphia, Boston, Baltimore, Louisville, Charleston and Cincinnati, all pledged allegiance to the *Merchants’ Magazine* and made Hunt an honorary member of their institutions. The New York, St. Louis and Cincinnati Chambers of Commerce, and the Baltimore, Chicago, Pittsburgh and Philadelphia Boards of Trade also passed resolves exclaiming the virtues of the magazine as well.¹⁸²

While no membership records survived, it appears that by the mid-1850s most men in the upper echelons of American society were reading Hunt’s periodical. The leading businessmen and politicians of the era such as Supreme Court Justice Levi Woodbury, Missouri Senator Thomas Benton, and Massachusetts capitalists Nathan Appleton and Patrick Tracy Jackson all had subscriptions to the magazine and some even contributed articles to the magazine. After commenting on how he read *Hunt’s* not only at home but on his business trips, Boston manufacturing magnate Abbot Lawrence deemed “this periodical of value not only to the merchant, but to the statesman, diplomatists, jurist, manufacturer, mechanic, agriculturalist, and national economist.”¹⁸³ Henry Clay praised the magazine for collecting “a large amount of valuable statistical and other information, highly useful, not only to the merchant, but to the statesmen, to the cultivator of the earth, to the

¹⁸² The ever-changing list of organizations who sponsored and praised the magazine appeared on the back cover page of each edition.

¹⁸³ Letter from Abbot Lawrence to Freeman Hunt printed in *Daily National Intelligencer*, July 15th 1854.

manufacturer, to the mariner, in short, to all classes of the business and reading community.”¹⁸⁴ Charles Sumner wrote that the paper was “as diversified as the important subjects it treats and tempered by the candor which is the companion of Truth.” Even American President Millard Fillmore commended the magazine as “one of the most valuable periodicals that were ever published.”¹⁸⁵

Newspapers heaped even more praise upon Hunt and his magazine, while noting its widespread circulation. In a special piece for *Godey's Magazine* on “New York Literati” in 1846, none other than Edgar Allen Poe devoted an entire article to Hunt. “The journal is regarded as absolute authority in mercantile matters,” Poe gushed, “circulates extensively not only in this country but in Europe, and even in regions more remote.” Not stopping there, Poe noted that *Hunt's* was “regularly complimented by the English mercantile authorities, has every bank in the world for an eager subscriber, every consul, every ship-owner and navigator; is filed away as authority in every library, and thought of in half the countries of the world as early as No. 3 in their enumeration of distinguished Americans.”¹⁸⁶ Finally, when French engineer Charles Minard decided in 1844 that he wanted to create a global statistical map of cotton commodity flows, he derived the data for his map not from French or English periodicals but rather from *Hunt's*. *Hunt's*, it appears, was not only changing the way American capitalists viewed the United States but influencing the vision of investors across the world as well.¹⁸⁷

¹⁸⁴ “Letter from the Hon. Henry Clay,” *Hunt's Merchants Magazine*, 21 (1849): 368.

¹⁸⁵ *Hunt's Merchants Magazine*, 31 (1854):262; *Hunt's Merchants Magazine*, 24 (1851) back cover.

¹⁸⁶ Edgar Allen Poe, “The Literati of New York,” *Godey's Magazine and Lady's Book*, 32 (1846) 269-70.

¹⁸⁷ For Charles Minard's maps see Michael Friendly, “Visions and Re-Visions of Charles Joseph Minard,” in *Journal of Educational and Behavioral Statistics*, Vol. 27, No. 1, p. 32-4; Arthur H. Robinson, “The Thematic

The expansion of *Hunt's* content from strictly mercantile, mostly import/export pursuits to an array of domestic channels of investment was reflected in the statistical tables that appeared at the end of every issue. The early editions of *Hunt's* were dominated by the more traditional mercantile statistics that assisted those invested in international commerce, bank stocks and government bonds. This included charts on global commodity prices, maritime insurance premiums, bank stock figures, gold quantities per country, public debt comparisons, import/export trade balances and foreign exchange rates. Seeing the world more through the eyes of an importer than a manufacturer, in these early years Hunt published just as many statistical tables on European manufacturing than he did on American production. While Hunt did devote some space to statistics on Lowell mills' dividends, urban real estate, Buffalo canal receipts and Cincinnati pork exports from the very beginning, these domestic investment figures were in the minority. In the first thirty volumes of the magazine printed between 1839 and 1843, nearly seventy percent of Hunt's statistical tables can be labeled 'mercantile' in scope. By the early 1850s, however, Hunt had dramatically shifted the focus of his statistics to domestic investment channels. While mercantile statistics still appeared frequently, their proportion dropped significantly from seventy percent in the years 1840 to 1842 to forty-seven percent in the years 1850 to 1852. During these years, there was a sharp increase in American manufacturing statistics as well as railroad and canal figures.

Maps of Charles Joseph Minard," in *Imago Mundi*, Vol. 21 1967, pp. 95-108; Gilles Palsky. *Des chiffres et des cartes: Nascence et développement de la cartographie quantitative française au XIXe siècle*. (Paris: Ministère de l'enseignement supérieur et de la recherche, Comité des travaux historiques et scientifiques, 1996).

Hunt's greatest statistical innovation, however, was his novel use of population figures. In early America, few merchants took much interest in population statistics. As opposed to the numerous commodity price currents published daily in papers such as the *Commercial Advertiser*, tables of census results were rarely seen.¹⁸⁸ With their capital invested mostly in international trade rather than domestic expansion, American businessmen had little reason to examine such figures. Viewed mostly as a tool for determining Congressional representation, newspapers were far more focused on the political ramifications of census figures than their economic ones. Statistical gazetteers of the time written explicitly for merchants, such as Timothy Pitkin's *Statistical View*, were filled with pages of import and export data but included only a few, rather meager, population tables.¹⁸⁹

Hunt's changed all this. From the very first volumes of the magazine, Hunt included a fair amount of population tables under the title of "miscellaneous statistics." By the fourth volume, he had given population statistics its own segment in the statistical section of the magazine, alongside the figures on manufacturing, commercial and banking statistics. In a move unprecedented in commercial literature, Hunt sent a message to his readers that population figures mattered to businessmen. But this was only the first step in the education of America's investors. To see how and why businessmen in the 1820s largely ignored population statistics while those in 1880 became obsessed with them, we must

¹⁸⁸ My random sampling of 50 issues of the *New York Commercial Advertiser* from 1800 until 1825 revealed that over 80 percent of the articles on the census were related to congressional representation and not economic issues.

¹⁸⁹ Timothy Pitkin, *A Statistical View of the Commerce of the United States* (New York, 1817).

shift our focus away from Hunt and towards two of the most important contributors to his magazine: Western booster Jesup Scott and Southern economist George Tucker.

The Western Booster

Born and raised on a Connecticut farm to a wealthy family of old New Haven stock, Jessup Wakemen Scott headed westward to Ohio in 1831 in order to oversee his father-in-law's investment in land on the southern shore of Lake Erie. In 1825, the Ohio state legislature had chartered the dredging of a canal that would link Cincinnati to Lake Erie and many speculators such as the Scotts had scrambled to buy up the land along the lake in hopes that, in the future, the canal's terminus would fall upon their land. Along with a few other investors Scott helped plat the city of Toledo on the banks of the Maumee River.¹⁹⁰ Toledo was a capitalist enterprise from the start and even its name was chosen for marketing reasons; as one investor noted, it "is easy to pronounce, is pleasant in sound, and there is no other city of that name on the American continent."¹⁹¹ In an era Scott would later recall for its "memorable speculation in wild lands and wild cities," he and his fellow Toledo inhabitants competed with other towns along the lake in the 1830s for the blessed canal's endpoint in a political game of geographical roulette.¹⁹²

¹⁹⁰ Jesup Wakeman to Jesup Scott, 1833?, Jesup Scott Papers, Toledo Public Library, box 1, folder 1; For Scott's initial desire to move to the area for business reasons see Scott to John E. Hunt, July 1828, Jesup Scott Papers, box 1, folder 1.

¹⁹¹ Federal Writers' Project. *Ohio: The Ohio Guide* (Columbus, 1940) 326.

¹⁹² Scott quoted in Charles Glaab, "Jesup Scott and a West of Cities," *Ohio History* 73 (1964) 3-12; For the history of Toledo speculation see the excellent real-estate map collection at Toledo Public Library which contains numerous plats that detail who owned each part of the city. See also Harry Scheiber, *Ohio Canal Era: A Case Study of Government and the Economy, 1820-1861* (Athens, Ohio, 1968) and "Entrepreneurship and Western Development: The Case of Micajah T. Williams," *The Business History Review* (1963): 345-368; H.E. Davis, "Elisha Whittlesey and Maumee Land Speculation," *Northwest Ohio Quarterly* 15 (1943): 139-58; Besides Glaab, for the writings of Jesup Scott see Cronon, *Nature's Metropolis*, 35-46; Smith, *Virgin Land*, 155-64.

By 1836 the canal had not yet reached anywhere near the lake but Scott had still managed to accumulate \$400,000 worth of real estate in northwestern Ohio. Or so he had thought at the time. When reality finally caught up to the runaway lot prices in the Panic of 1837, Scott was forced to liquidate nearly all his holdings, including the family mansion in Connecticut. Still willing to take risks, however, Scott decided to hang on to his plots of land in Toledo. It was the right decision. In 1843 the Wabash-Erie Canal finally opened for business– with Toledo as its outlet to the great lake. If Scott could convince eastern capitalists that the Toledo canal was destined for greatness, he would become a very wealthy man. That year, he wrote the first of many articles for *Hunt's*.¹⁹³

Like many men who invested in cities that mostly existed on paper, Scott's desire to attract eastern capital turned him into a newspaper man. Shortly after he arrived in Ohio, he founded *Miami of the Lake* – the first weekly in northwestern Ohio. Later, he briefly became the editor of the *Toledo Blade*, the town's leading daily paper.¹⁹⁴ Throughout his career as newspaper editor, however, Scott's imagined audience was never the local farmer but the eastern capitalist, as he hoped to convince them to divert their capital to the soon-to-be global empire of Toledo by “disabusing the public mind at the east, if our sheet shall have the fortune to circulate there, of the numberless false impressions in regard to this section.”¹⁹⁵

¹⁹³See map in Scott papers which reveals exactly where he owned land in Toledo; Glaab, “Jesup Scott”; For a sense of the heated rivalries which emerged over land speculation and the canal end point see Scott, “Note in reply to an attack on JW Scott in the Maumee River Times,” 1844. Jesup Scott Papers, box 1, folder 1.

¹⁹⁴ For a good sense of Scott's life on the frontier see the first chapters of his son Frank's unpublished autobiography. “Autobiography – Frank J. Scott” Jesup Scott Papers, box 1, folder 8.

¹⁹⁵ Jesup Scott, *Miami of the Lake*, December 11th 1833.

As Scott understood, in order to convince eastern capital to invest in Toledo, he needed to reach into the investors' homes, their sitting parlors, their inner circles. While the local newspapers he edited never reached New York, Boston or London, Scott succeeded in having his voice heard in the east and Europe by becoming a frequent contributor to *Hunt's*. Beginning with his first article in 1843 and over the next decade, Scott published numerous essays praising the pecuniary potential of the western frontier as he carved out a niche for himself as the magazine's expert on urban investment and westward expansion. While some town boosters of this era used geographical determinism to prove that the future capital of the American empire lay in Alton, Illinois or in Flat Rock, Michigan, Scott was one of the first town promoters to lean heavily on population statistics to further his arguments – and his sales pitch.¹⁹⁶

In his first set of articles for the magazine, Scott provided a lengthy analysis of urban population statistics that would become his trademark. In order to explain what the future held for the American people (and American capital), Scott began by quoting the census returns not of the United States – but of England. Pointing to the fact that “the proportion of people engaged in agriculture has decreased decidedly with every census,” Scott cited a report from England that concluded that “those engaged in manufacturing...as compared with the agricultural class, were 6 to 5 in 1801, 8 to 5 in 1821 and 2 to 1 in 1830.”¹⁹⁷ By calculating the rate of increase in American urban populations with the help of the 1830 and 1840 censuses, Scott then went on to prove that similar demographic patterns had

¹⁹⁶ For perhaps the fullest and best example of Scott's sales pitch see "Jesup W. Scott's lecture read before the Maumee City Lyceum, Nov 29th 1842," Jesup Scott Papers, box 1, folder 3.

¹⁹⁷ J.W. Scott, "The Internal Trade of the United States," *Hunt's Merchants Magazine*, 8 (1843) :32. Scott was quoting a British member of parliament

already commenced in the United States and that in America - as in England - the percentage of people who worked the land was already dropping.¹⁹⁸

As he did in almost all of his articles, Scott used his own state of Ohio as the best example for this rise in urbanization, illustrating that even though the entire Buckeye State had grown 62 percent in the past decade, population in its largest urban centers had risen by a whopping 138 percent.¹⁹⁹ Projecting his calculations forward, Scott predicted that by the year 1890, only a third of the population would be farmers. In the future, Scott contended, there would be a complete division of labor in the west as most Americans would live in cities and work in manufacturing while the goods they produced would be exchanged with the minority of rural farmers still needed to produce the food and raw materials cities depended upon. Most Americans would no longer depend on the land to survive - but rather on the market. Instead of being scattered across the Great Plains, they would gravitate towards great cities.

But where would these great cities be? "How are we to know beforehand with reasonable certainty," Scott rhetorically asked, "which is to be the favored cities destined to show forth such wonderful augmentation?" Again, Scott's answer lay in population statistics. "Of the sixty-nine cities...which doubled their numbers in ten years and under, sixty-one are in the Western plain," Scott wrote, concluding that New England's "ascendency as a manufacturing region is temporary, waiting only the development of the

¹⁹⁸ For a representative sample of these arguments see "The Progress of the West," *Hunt's Merchants Magazine*, 14 (1846) 163-5; "Commercial Cities and the Towns of the United States," *Hunt's Merchants Magazine*, 19 (1848), 385; "The Growth of Towns in the United States," *Hunt's Merchants Magazine*, 25 (1851), 559-565; "Our American Lake Cities," *Hunt's Merchants Magazine*, 31 (1854) 403-13. A list of all of Scott's contributions to Hunt's can be found in his Jesup Scott Papers, box 1, folder 12.

¹⁹⁹ Scott, "The Internal Trade."

new country about the lakes and the upper Mississippi to be superseded.”²⁰⁰ Illustrating to the readers of *Hunt’s* that population statistics could be used to signal exactly where they should invest their capital, Scott’s articles often included charts such as the one below, which calculated the number of years it took for a city to double its population. Through statistical rankings such as this, Scott transformed urban population figures into an economic indicator, helping eastern investors to decide which regions to invest in by “indicating the direction to which the industry of our people tends, in those portions of the west, where population has attained a considerable degree of density.”²⁰¹ As William Cronon has pointed out, charts such as this were deceptive: the smaller the town, the easier it was for it to double its population. Such a table, however, provided Scott with just the statistical effect he desired as it put Toledo in the top ten most profitable cities in America, far above more accomplished cities in New England or the Atlantic coast.²⁰²

²⁰⁰ Scott, “*Our American Lake Cities*,” 404, 410-411. Chart taken from Scott, “Growth of Towns,” 562.

²⁰¹ Scott, “The Internal Trade,” 35.

²⁰² Cronon, *Nature’s Metropolis*, 398 n68.

AVERAGE TIME OF DUPLICATION.					
	Years.		Years.		Years.
Milwaukee.....	3	Springfield.....	10	Troy.....	14½
Chicago.....	3½	Fall River.....	10	Wilmington Del.....	15
St. Louis.....	4	Hartford.....	11½	Lancaster, Pa.....	15½
Manchester, N. H....	4	Reading.....	11½	Patterson.....	16
Sandusky City.....	5½	New York.....	12	Bath, Me.....	16
Columbus, O.....	6	Boston.....	12	Albany.....	16½
Cleveland.....	6	Washington.....	12	York, Pa.....	20
Toledo.....	6	Rochester.....	12	Utica.....	24
Cincinnati.....	6	Chillicothe.....	12	New Bedford.....	26
Marietta.....	7	Philadelphia.....	12½	Lockport.....	27
Indianapolis.....	7½	Savannah.....	12½	Schenectady.....	28
Pittsburg.....	8	Portland.....	12½	Newburyport.....	28
Newark, N. J.....	8	Providence.....	12½	Norfolk.....	30
Oswego.....	8	Lynn.....	12½	Petersburg, Va.....	32
Dayton.....	8	New Haven.....	13	New Orleans.....	34
New Albany.....	8	Columbia, S. C.....	13	Charleston, S. C.....	35
Buffalo.....	8½	Baltimore.....	13½	Portsmouth.....	40
Nashville.....	8½	Wheeling.....	13½	Salem.....	42
Detroit.....	9	Lowell.....	14	Newport, R. I.....	65
Zanesville.....	9	Mobile.....	14	Natchez.....	85
Louisville.....	9½	New London.....	14	Poughkeepsie.....	90
Worcester.....	9½	Bangor.....	14	Hudson.....	100
Madison.....	9½	Richmond.....	14½	Carlisle.....	180
Syracuse.....	10				

Figure 5: Jessup Scott's growth chart. This typical chart by Jessup Scott transforms population growth into an economic indicator that can be used to decide in which city businessmen should invest their capital. Scott, "The Growth of Towns in the United States," *Hunt's Merchants Magazine*, 25 (1851): 562.

Implicit in all of Scott's statistical analyses was a simple argument: landless people made for big profits. By convincing his reading public that Toledo's population was on the rise, that American yeoman would soon be moving in mass from country to city, that the new manufacturing centers of America would be out West, Scott hoped to prove to eastern investors that the West was not simply a land of self-sufficient farmers off of whom it would be impossible to reap sustained profits. On the contrary, Scott's statistics demonstrated that there already existed a landless population out west that could be funneled into an array of manufacturing enterprises much like Lowell, Lynn or Liverpool. Thanks to these demographic changes, Scott argued, the time was fast coming when American capitalists could safely invest in western cities, knowing full well that the supply

of labor needed to construct buildings, man factories, dredge canals and fill the future urban tenements of the tomorrow would be available.²⁰³

How different this worldview was from that of early America! Unlike Scott, agrarian republicanism had rued the day land would run out and a new breed of landless Americans would be forced to move into cities. So long as a man “can have a piece of land of his own, sufficient by his labor to subsist his family in plenty,” Benjamin Franklin had argued, he will not be “poor enough to be a manufacturer and work for a master.”²⁰⁴ Thomas Jefferson had been so sure that urban manufacturing “begets subservience and venality” and “suffocates the germ of virtue” that he took to calculating how long it would be until America’s population density reached that of England.²⁰⁵ (He calculated that it would take 95 years. The Louisiana Purchase, however, was designed to push the day of yeoman reckoning back even further.²⁰⁶) As we saw in chapter two, for these early Americans population growth – especially in cities – was not something to embrace but to fear. Scott, on the contrary, celebrated what was Jefferson and Franklin’s greatest nightmare: Population growth that would turn yeoman America into capitalist England.²⁰⁷

Scott was not only presenting a dramatically different view of what American society should look like, he was also changing the way American citizens were being

²⁰³ Scott’s need for new emigrants was also expressed in his other writings, including the *Ohio and Michigan Register and Emigrants Guide*, which he wrote in 1832 in order to attract immigrants to the area. The only copy of this book is in Jesup Scott Papers, box 1, folder 12.

²⁰⁴ *The Works of Benjamin Franklin*, ed. Jared Sparks (10 vols., Boston, 1844-1848), 19.

²⁰⁵ Jefferson, *Notes on the State of Virginia*, 172.

²⁰⁶ For Jefferson’s calculations and fear of population growth see p. 89.

²⁰⁷ For the notion that early Americans preferred spatial expansion to temporal ‘progress’ partly due to population growth, see Drew R. McCoy, *The Elusive Republic: Political Economy in Jeffersonian America* (Chapel Hill: University of North Carolina Press, 1980).

statistically perceived. In 1800, then-President Thomas Jefferson had requested that some more detailed population longevity statistics be added to the census. His reasoning behind this addition was that they could “determine the effect of the soil and climate of the United States on the inhabitants thereof.”²⁰⁸ As this request demonstrates, the American citizenry was at the center of Jefferson’s statistical vision, the purpose of numbers being to measure the effect certain social and natural phenomena had on people. With Scott’s statistical vision, on the other hand, the role of American citizens had been reversed. Using population data to indicate the location of profitable investments, the American people had become a mere means to an end, a functionary of capital accumulation that could be plugged into profit-maximizing equations. Scott was not interested in measuring the effect capital growth had on people, but rather the effect people had on capital growth. For Scott, statistics were not to be used to measure the welfare of the American people, but potential profit. American citizens were simply income-generating units of growth. They were human capital.²⁰⁹

With the help of his population statistics, Scott also taught the American investor that picking a corner lot required far more than just knowing the location of the canal endpoint. It required knowing the “direction to which the industry of our people tends.”²¹⁰ Following canal flows was not enough - American capitalists needed to follow the spatial flow of people as well, statistically monitoring how they moved through space. As a man who thought he had made \$400,000 only to see it dissipate in a moment’s notice, who had

²⁰⁸ For Jefferson’s memorial on the census, see *Early Proceedings of the American Philosophical Society* (Philadelphia, 1884) 293.

²⁰⁹ The *New Palgrave Dictionary of Economics* defines human capital as “the productive capacities of human beings as income producing agents in the economy.”

²¹⁰ Scott, “Internal Trade,” 35.

won the game of canal roulette yet still owned a town that existed largely on paper, and who would only make his fortune if his lots became factories, warehouses and homes, Scott understood that the monopolization of space alone could not make him rich. What determined the value of urban spaces was not only their spatial scarcity but the potential profitability they held for the manufacturer, retailer or real-estate entrepreneur who intended to develop them into factories, shops or homes. Investing in urban space, Scott had come to realize, depended on the rise of an industrializing, capitalist society. You needed the labor power and material needs of people – and not just any people. You needed people who could work in factories and live in rented apartments. People who did not own productive property or their homes. In short, you needed a healthy dose of landless people. For urban lots to become long-term capital investments, Scott's statistical message implied, the platted cities on paper would have to come alive – and the political economy of Jeffersonian America would have to go.

The not-so-Southern Economist

As Gilded Age institutional economist Richard Ely once noted, it was common knowledge amongst contemporary antebellum thinkers that “the South led the North in economics before the Civil War... and up to that time Virginia was ahead of Harvard.”²¹¹ While this may seem unintuitive, it makes sense. For most of the Jacksonian and antebellum period, it was the South that was the more capitalist society, not the North. Based on a class division between landowners and laborers, the classical economic theories of Malthus, Smith and Ricardo which examined the developing capitalist relations in England were mostly irrelevant to the largely free-holding population in the northern

²¹¹ Ely quoted in Tipton Snavely, *George Tucker as Political Economist* (Charlottesville: University of Virginia Press, 1964).

United states. Terms such as rent, wages and even profit would have been either incomprehensible or unacceptable to most Americans in the north who worked the land they owned, received no wages, paid no rent and invested no capital. Amongst plantation owners in the South, however, where agriculture was a slave-based capitalist enterprise, Ricardo's theory of rent or Adam Smith's theory of wages could, with some minor modifications, ring true. This is especially true of wage theory since in classical economics wages were defined as the amount of food you needed to give your laborers in order to keep them alive and productive. This, of course, dovetails nicely with the economics of slavery.²¹²

If what Ely said about Sothern superiority in the field of political economy was accurate, this would have made George Tucker – the first ever professor of political economy at the University of Virginia – one of the leading economists in the country. Other historians of economic thought seem to think this was so, with one scholar arguing that he doesn't know "of any American economists of the decades of the 30s and 40s who would be entitled to higher rank."²¹³ Apparently Freeman Hunt did not either, as he filled the pages of his magazine with Tucker's economic theories throughout the 1840s. Beginning in the magazine's second volume, Hunt tapped Tucker as his magazine's "house economist" and published a chapter of Tucker's *The Laws of Wages, Profits and Rent* each month.²¹⁴ A few years later, Hunt also serialized Tucker's study on the 1840 census' population statistics.

²¹² On the history of economic thought in the Jacksonian and antebellum North and South see Joseph Dorfman, *The Economic Mind in American Civilization* (3 vol., New York: The Viking Press, 1946-1959); Paul Conkin, *Prophets of Prosperity: America's First Political Economists* (Bloomington: Indiana University Press, 1980).

²¹³ Qtd in Snively, *George Tucker*, 14.

²¹⁴ For the book version see Tucker, *The Laws of Wages, Profits and Rent* (Philadelphia, 1837).

This time, not only did Tucker's manuscript appear, month by month, in the magazine but Hunt decided to publish it in book form himself.²¹⁵ As the dominant voice of economic theory in the magazine throughout the 1840s and early 1850s, Tucker had a lasting influence on how *Hunt's* readers conceived of the American economy. Since political economy was not yet a taught at most colleges or universities, an entire generation of American businessmen first encountered the classical economic theories of Adam Smith and David Ricardo through the writings of George Tucker in *Hunt's*. And thanks to his near obsessive devotion to population statistics, Tucker too played a crucial role in transforming the way the readers of *Hunt's* viewed the proliferation of the American people.²¹⁶

George Tucker lived in a slave-based society almost his entire life. Raised on a Bermuda sugar plantation his family had owned for nearly 200 years, he left for William and Mary College in 1787. For the rest of his exceptionally long life, Tucker practiced law, became a member of Congress, invested in canals, speculated in urban lots, taught economics and moral philosophy and never stopped writing. Aptly coined a "Hamiltonian in disguise" by historian Joseph Dorfman, Tucker was never your typical southerner. All throughout his life, his heart was set on transforming the south from an agrarian, slave society into a bustling metropolis with large cities, big factories, plenty of wage laborers – and no slaves. In all of his eclectic writings, which ranged from science fiction and

²¹⁵ George Tucker, *Progress of the United States in Population and Wealth for Fifty Years* (New York: Hunt's Merchants Magazine Press, 1843)

²¹⁶ For the study of political economy in early America see Dorfman, *The Economic Mind*, 2:503-512, 695-713.

plantation romance novels to satiric humor and standard economic prose, he criticized the political economy of both yeoman freeholders and slave-owning planters.²¹⁷

In *Letters from Virginia Translated from the French*, an anonymous satire of the South, Tucker critiqued slavery's "genteel laziness" and argued that canals would promote economic progress and urban growth in the south, especially in Norfolk. (Tucker was heavily invested in the Roanoke Canal and owned lots in – where else? - Norfolk).²¹⁸ In *The Valley of Shenandoah*, the precursor to the American plantation novel, Tucker presented plantation culture and republican agrarianism as far too focused on virtue, honor and public spirit while lacking any prudent, rationalized, business sense.²¹⁹ In *Voyage to the Moon; with Some Account of the Manners and Customs, Science and Philosophy, of the people of Morosofia, and Other Lunarians*, which appears to be the first science fiction book in American history, Tucker describes a utopian lunar civilization which began a lot like yeoman America in that it was highly equal but developed (thankfully in Tucker's eyes) into an unequal, urbanized society where landholders earned "extraordinary profits."²²⁰

It was, however, his writings on political economy for which Tucker became most well known. A Malthusian thinker who, as one historian has noted, tended to "out-Malthus

²¹⁷ For Tucker's biography see Robert C. McLean, *George Tucker: Moral Philosopher and Man of Letters* (Chapel Hill, 1961). For Tucker's economic thought see Snively, *George Tucker*; Dorfman, *Economic Mind*, 2:538-51, 881-89; Conkin, *Prophets of Prosperity*, 152-66.

²¹⁸ George Tucker, *Letters from Virginia Translated from the French* (Baltimore, 1816).

²¹⁹ George Tucker, *The Valley of the Shenandoah* (New York, 1824); For a good analysis of this book see Christopher Michael Curtis, *Jefferson, Freeholders and the Politics of Ownership in the Old Dominion* (Cambridge: Cambridge University Press, 2012) 90-93.

²²⁰ George Tucker, *Voyage to the Moon* (New York, 1827) 82.

Malthus,” Tucker the economist was infatuated with population growth.²²¹ In 1798, Thomas Malthus had famously argued that because people grew exponentially but food grew only geometrically, the niggardliness of nature would condemn mankind to a life of subsistence, poverty and want. Pursuing Malthus’ line of thought, Tucker agreed that as the population of a nation grew, wages would have to drop due to an “increased competition of the laboring classes in consequence of the increase in population.” Unlike Malthus, however, who painted an especially grim picture of mankind’s fate, Tucker celebrated these immutable laws of population because finally capitalists would be able to profit from the labor of Americans without having to enslave them.²²²

To understand Tucker’s argument, we must begin with his view of yeoman America. In the New World, Tucker noted, since “land is plenty, and population thin, raw produce will commonly exchange for the amount of labor expended in producing it.”²²³ In other words, a low population density gave white American farmers the bargaining power to receive a full return for the fruits of their labor. As the population of the United States increased, however, this would come to an end as some farmers would be forced off the land and into cities, where they would see their wages drop due to competition. All this would be a boon for the owners of land and other means of production, as population growth would lead not only to diminishing wages but stronger demand for foodstuffs and other manufactured consumer goods. The profits generated from the emerging gap

²²¹ Joseph J Splenger, “Population Theory in the Antebellum South,” *The Journal of Southern History*, 2 (Aug, 1936) 362.

²²² For a good overview of Malthusian thought see Robert L. Heilbroner, *The Worldly Philosophers: The Lives, Times and Ideas of the Great Economic Thinkers* (1953, 7th ed. New York, 1999) 75-105. Snavely, *Tucker*, 57; Splenger, “Population Theory in the Antebellum South.”

²²³ George Tucker, “Theory of Profits” *Hunt’s Merchants Magazine*, 2 (1840): 91.

between low wages and high commodity prices would “continue to rise with every successive increase of numbers.”²²⁴ Not only would this population growth lead to the profitable exploitation of free Americans, it would also end slavery. When “labor will finally attain a price so low, that the earnings of a slave will not repay the cost of rearing him,” he argued, “then, of course, his master will consider him as a burdensome charge rather than a source of profit.”²²⁵ Slavery would not end because it was exploitative, Tucker seemed to be saying, but rather because - compared to wage labor - it would not be exploitative enough.²²⁶

When the 1840 census was published, Tucker quickly moved from theory to practice, as he began poring over census statistics in order to see what the future held for the fate of the American republic. The final outcome of this analysis was Tucker’s 300-page *Progress of the United States Population and Wealth in Fifty Years*, which appeared in its entirety in *Hunt’s Merchants Magazine*. (Hunt also made sure to publish it in book form). In this work, Tucker created a complex array of never before seen indexes and statistics, which compared the rate of increase in the American population by region, race, state and city. Like Scott, Tucker also compared the proportion of Americans laboring in agriculture to those working in manufacturing as well as those living in rural areas to those dwelling in cities in order to see if his theories were already bearing fruit and the number of urban, landless workers was rising. As the word progress in the title suggests, Tucker was pleased with the results: Using such statistical indicators as the percentage of Americans who

²²⁴ Ibid, 91.

²²⁵ George Tucker, “Progress of Population and Wealth,” *Hunt’s Merchants Magazine*, 8 (1843): 429.

²²⁶ The notion that slavery was not efficient, productive and profitable was a common argument amongst Americans of the era. See chapter five for more as well as Fogel and Engerman, *Time on the Cross*.

worked on farms and lived in cities, he concluded that urbanization was on the rise. Soon, it appeared to Tucker, his utopian moon colony of city development, wage labor and large profits would become a reality on earth.²²⁷ Tucker, however, did not live to see the Civil War that would end slavery for him and propel wage labor to greatness. A slave-owner who sought to kill slavery with the mechanisms of the market in the end died at their very hands: On March 21st 1861, while waiting to board a steamboat in Mobile, Alabama, a bale of slave-picked cotton fell off the barge that was heading up river, striking Tucker in the head and killing him.²²⁸

Growth: The Final Frontier?

Scott, Tucker and Hunt were not the first Americans to realize that population growth was perhaps the most important indicator of future profit in urban investment. Unsurprisingly, New England textile manufacturers and New York real-estate developers – the first Americans to invest their capital in urban growth and successfully capitalize land or labor in the north – had reached this conclusion as well. Realizing that their textile manufacturing empire would never have bore fruit were it not for the rising population density and lack of available farm lands in Massachusetts, Boston capitalists such as Abbot Lawrence hated yeoman land policies which gave New Englanders an incentive to get up and leave the region. Linking people with profits, Lawrence told his Massachusetts constituents in an 1837 speech that those who sought to lower the price of western agricultural lands would “drain the [Bay] State of its population and wealth.”²²⁹

²²⁷ Tucker, *Progress and Population and Wealth*, 58, 101-118, 127-143.

²²⁸ On Tucker’s untimely death see Snively, *George Tucker as Political Economist*.

²²⁹ Lawrence quoted in Niles Weekly Register, April 8th 1837.

In New York City, real-estate man Samuel Ruggles, who among other things built Gramercy Park and the adjacent neighborhood, had been using urban population growth to calculate his future earnings as early as 1832. That year, New York Congressmen and Phoenix Branch Bank President Benjamin Tallmadge requested from Ruggles, a man known for his calculating character, “some statistics in regard to interests in the city of New York” before the Albany legislature returned from recess. Ruggles replied with a lengthy letter that focused mostly on population figures, a report that gives us a rare glimpse into the calculating mind of one of the first real-estate capitalists in the country.²³⁰

Comparing New York to London, Ruggles began by noting that “1000 acres will not accommodate more than 100,000 inhabitants.” Using this equation as is guide, Ruggles calculated that the southern-most wards of the city were almost full. Pointing to the streets south of 24th street, Ruggles concluded that “the whole of our next increase must be thrown upon this section.” Seeing as the streets south of 24th street were precisely where Ruggles had spent \$180,000 to transform swampland into the new Gramercy Park neighborhood, it seems reasonable to assume that Ruggles had made these very population calculations prior to choosing a location for his investment in urban space.²³¹

This was not the only way Ruggles was using urban growth statistics to estimate future earnings. As Ruggles went on to explain to Tallmadge, New York City’s population was roughly growing at a clip of 15,000 souls per year. This meant that the city would require an additional 1500 houses a year, “which at 2000 dollars each will cost three million annually.” Continuing, Ruggles noted that most of the money for building

²³⁰ Benjamin Tallmadge to Samuel Ruggles, Dec 18th, 1831, Samuel Ruggles Papers, NYPL, folder 15.

²³¹ Ruggles to Tallmadge, Jan 23rd 1832.

construction would have to be borrowed, and he noted that in New Orleans such financing was lent out at ten percent interest. As a banker, this information was probably not lost on Tallmadge, nor had it been mere trivia for Ruggles - throughout the 1830s, he made large sums of money helping other building developers finance their projects.²³²

Yet despite these important precedents, it was the joint collaboration of Scott, Tucker and Hunt that first popularized, canonized and institutionalized the use of population statistics as indicators of future capital gains. They were the ones who turned Ruggles' back-of-the-envelope calculations into a publically circulating form of knowledge. Newspaper coverage in the 1850s demonstrates that eastern businessmen began internalizing *Hunt's* emphasis on population statistics well before the existential crisis that gripped the city of St. Louis in 1880. For example, in the lead up to the 1850 census the *Ohio Daily Statesmen* reminded its readers that population figures were "important," since they "indicat[ed] the proper direction for the investment of capital."²³³ After the results were in, tables upon tables of urban population statistics began to appear in dozens of papers across the old Northwest, as the booster-editors of every ramshackle town in Ohio seemed to be claiming that their town had grown the most rapidly. Perplexed by this burst of municipal patriotism, by the 1870s one onlooker puzzled over the "universal but after all inexplicable municipal pride which glories in a rapid growth of population above

²³² Ruggles to Tallmadge, Jan 23rd 1832.

²³³ *Daily Ohio Statesman* (Columbus), January 18th, 1851. Ohio newspapers put perhaps the greatest emphasis on population statistics, with the city of Cincinnati leading the way. The statistical charts of Charles Cist, the editor of the Cincinnati *Daily Gazette* and Edward Mansfield, the editor of the Cincinnati *Chronicle*, appeared in papers across the country. Cist also published numerous statistical gazetteers and was employed by the census. Mansfield later became the first Commissioner of Statistics in Ohio.

everything else.”²³⁴ Scott’s population charts appeared often in other publications, including *A Practical Guide on Business*, maybe the first “how-to” book in American history intended for capitalist investors.²³⁵ Even in England, books on “the progress of America since Columbus” were publishing Scott’s writings on population.²³⁶

The most frequent table to appear in newspapers was a ranking of American cities by population. Such growth rankings quickly became a decennial tradition as editors supplied the color commentary as to why Boston had fallen from third to fifth or Cincinnati had risen from twelfth to sixth. Often times these articles read more like exciting sporting events than bland economic statistics. “Cleveland, Columbus and Dayton started even in the race in 1840,” one Ohio newspaper pronounced. “Since that time each has more than doubled its population. The census of 1850 will soon determine their relative standing.”²³⁷ Decades before the cities of the Midwest competed for the baseball pennant, they battled for growth. Comparing the latest census to the previous one, these “standings” almost always measured the percentage of each city’s decennial growth. Treating towns like corporations and humans like capital, an uninitiated reader might well have thought that Cleveland was not a city at all but rather a joint-stock corporation which had yielded 34% growth not in people but in profits, as the similarities of the tables below help illustrate.

²³⁴ Boston *Daily Advertiser*, Sept 26th, 1870.

²³⁵ Edwin Troxell Freedley, *A Practical Treatise on Business* (Philadelphia, 1853) 275.

²³⁶ John Macgregor, *The Progress of America from the Discovery by Columbus to 1847* (London, 1847) 747-754.

²³⁷ *Ohio State Journal* (Columbus), July 23rd, 1850.

The following list of the twenty most populous cities of the United States, arranged in the order of population, gives the numbers as they will stand in the published **census** report when it appears. For the sake of comparison, the population of the same cities for 1860, and the percentage of increase during the ten years, is included in the same table:—

No.	Cities.	1870.	1860.	Per Cent.
1.	New York.....	922,531	865,658	14.6
2.	Philadelphia.....	674,022	565,529	19.2
3.	Brooklyn.....	396,300	208,661	48.7
4.	St. Louis.....	310,884	160,773	93.4
5.	Chicago.....	238,983	109,260	173.7
6.	Baltimore.....	267,354	212,411	25.9
7.	Boston.....	250,526	177,840	40.9
8.	Cincinnati.....	216,239	161,044	34.3
9.	New Orleans.....	191,322	168,675	13.5
10.	San Francisco.....	149,482	56,802	163.2
11.	Buffalo.....	117,715	81,129	45.1
12.	Washington.....	109,204	61,122	78.8
13.	Newark.....	105,078	71,941	46.1
14.	Louisville.....	100,753	68,033	48.1
15.	Cleveland.....	92,846	43,417	113.9
16.	Pittsburg.....	86,235	49,217	75.3
17.	Jersey City.....	81,744	29,226	179.7
18.	Detroit.....	79,580	45,619	74.5
19.	Milwaukee.....	71,499	45,246	58.1
20.	Albany.....	69,422	62,367	11.4

Figure 6: Percentage of growth by city population.

AVERAGE DIVIDENDS OF BOSTON BANKS.

The following statement, for which we are indebted to Mr. Foxcroft, exhibits the annual average dividends paid by twenty-three Boston banks, during fifteen years ending with 1851:—

Atlantic.....per cent	5 27-30	Mechanics'.....per cent	6 23-30
Atlas.....	4 11-30	Merchants'.....	7 3-30
Boston.....	7 6-30	New England.....	6 21-30
City.....	5 12-30	North.....	5 8-30
Columbian.....	6 3-30	Shoe and Leather Dealers'.....	7 8-30
Eagle.....	5 28-30	State.....	5 24-30
Freeman's.....	7 11-30	Suffolk.....	8 24-30
Globe.....	6 19-30	Traders'.....	5 14-30
Granite.....	5 27-30	Tremont.....	6 1-30
Hamilton.....	6 9-30	Union.....	6 9-30
Market.....	6 23-30	Washington.....	5 7-30
Massachusetts.....	5 17-30		

Figure 7: Percentage of dividend given by Boston banks.

Conjuring up images of a collective race against other cities allowed newspaper editors to frame these growth figures not only as indicators of potential profit, but overall progress. As a result, in all these articles there existed an underlying assumption that the interests of urban residents and urban capitalists were synonymous. Seeking to transform

growth into a city-wide, cross-class goal, by 1880 St. Louis businessmen were typically equating the “prosperity” of the city with the “welfare of every business interest,” while assuming that the census results would not only “discourage capital,” but “dishearten the people.”²³⁸

How successful was this paean to growth? While it appears that American “growthism” was spreading rapidly in the mid-nineteenth century, this was hardly an uncontested process. Besides Jeffersonian agrarian republicanism which, as we have seen previous chapters, rejected the simplistic linkage of growth with progress, the greatest threat to the rise of American growthism might well have been the nativist parties which took the political scene by storm in the 1850s. While most historians have focused on the nativists’ virulently racist and xenophobic attitudes – they were also one of the first anti-growth movements in American history. Take, for example, an 1844 political pamphlet by New York City’s American Republican Party, the precursor to the Know-Nothing Party:

It is the whim of the enthusiast that delights many of our countrymen at seeing our country filling up with such rapidity and our public lands absorbed by foreigners, the exclusion of our sons, who are thus cheated out of every foot of good soil for their industry and of their political rights and privileges. It is a whim, we say, to be thus delighted with the idea of *numbers* and with the latitude given for boasting our numerical strength.²³⁹

Even by 1880, American growthism had hardly become mainstream. In the midst of his distress over the census results, St. Louis editor Joseph McCullagh pointed to the businessmen of the city and admitted that “most of the complaints against the present enumeration come from this class of citizen.” He then went on to pin the disappointing

²³⁸ See quotes in fn 2-3.

²³⁹ “The Crisis!: An Appeal to Our Countrymen, on the Subject of Foreign Influence in the United States,” (New York, 1844) 23. Italics in original. The anti -growth ideology was already apparent in New York City by the 1820s. See, for instance, William Jackson’s letter to the *Working Man’s Advocate* against the city’s population growth. Jackson’s letter was reprinted in *The Free Enquirer* (New York), Jun 12th, 1830.

results on the majority of St. Louis residents, who for some odd reason, did not care about the census nearly as much as the city's elites. "Thanks to the absence of any public-spirited zeal or interest in the affair," he snapped, "the reported population is from fifty to a hundred thousand less than the real population."²⁴⁰

While this chapter has argued that *Hunt's Merchants' Magazine's* population statistics played a crucial role in setting the groundwork for the rise of America's love affair with economic growth and the conceptualization of American citizens as human capital, the next chapter reveals how it would take far more than a business magazine to convince most Americans that capitalized growth was the most important goal of American society or that their mission in life was to produce as much cash-income as possible for "the economy." As we shall see in chapter four on the rise of moral statistics in Jacksonian America, most Americans did not measure progress in the 1830s and 1840s like Freeman Hunt, Jessup Scott or George Tucker. And as we shall see in chapters five and six it would take far more than urban population statistics to make most Americans believe the implicit message that undergirded all of *Hunt's* capitalizing statistics and pro-growth arguments: That what was good for capital investors was good for America.

²⁴⁰ St. Louis *Globe Democrat*, June 20th, 1880.

Chapter Four

An Asylum in Numbers: The Rise of Moral Statistics in Jacksonian America

On a chilly February day in 1844, a heated argument erupted on the floor of Congress regarding a letter that Secretary of State John C. Calhoun had sent to British diplomat Richard Pakeham a few months prior. “So far as that letter goes to impute to the people of the Free States a desire to oppose the progress of human rights,” Ohio Representative Joshua Giddings declared, “I regard it as a base slander upon Northern character.” At that moment, Giddings was interrupted by South Carolina representative Armistead Burt:

Mr Burt: I want to know if the member from Ohio meant to say that the Secretary of State has done, or is capable of doing, anything base?

Mr Giddings: I am a little surprised at your question.

Mr. Burt (much excited): That was your language.

Mr. Giddings: I hardly know how to understand this southern dialect.

Mr Burth: (amid cries of order, and the rapping of the chairman’s mallet). Do you understand your own language?

Mr. Giddings: If gentlemen will keep cool I shall soon be through my hour...I was humbled and mortified at seeing a weak and loosely penned lecture in favor of slaveholding made the subject of an official communication to the British government by an American Secretary of State; particularly as the whole argument against human liberty was based upon errors in our late census, which were palpably obvious to any person who would examine the official returns. Those errors relate to the numbered of insane colored persons reported to be in our free states.²⁴¹

In the letter to Parkeham which triggered this angry exchange, Calhoun had argued that “in all instances in which the States have changed the former relation between the two races, the condition of the African, instead of being improved, has become worse.”

Continuing, Calhoun argued that blacks which had been given freedom had “invariably sunk into vice and pauperism, accompanied by the bodily and mental inflictions incident

²⁴¹ 28th congress, 1st session, *Appendix to the Congressional Globe*, Senate, Feb, 1844, 708.

thereto – deafness, blindness, insanity, and idiocy – to a degree without example.” Calhoun then went on to substantiate his argument with an array of statistics. These figures showed, for instance, that the proportion of Northern blacks “who are deaf and dumb, blind, idiots, insane, paupers and in prison” was one of six while in the South it was one of 154.”²⁴²

This was neither the first nor the last instance in which statistical data would be used in a sectional dispute over slavery. In the 1840s, as Calhoun’s letter demonstrates, the statistics most often used in such debates were figures on insanity, education, mortality, idiocy, crime and pauperism. Using a term that had recently been made popular in Europe, contemporary Americans often referred to these types of figures as “moral statistics.”²⁴³ Viewed by both sides as central measures of progress and prosperity, northerners and southerners alike cited these moral statistics in order to prove the superiority of their respective society. Senator Giddings, therefore, was not upset that Calhoun had chosen to use such statistics as a litmus test for the worthiness of southern and northern society. Quite the opposite. He was upset because while he had a great deal of respect for the ability of moral statistics to gauge the wellbeing of American society, he believed that there existed grave errors in the 1840 census figures regarding the propensity for insanity amongst free blacks in the north.

²⁴² Calhoun’s letter to Pakenham can be found in “Proceedings of the Senate and Documents Relative to Texas” 28th congress, 2nd session, 1844, Senate Document 341, 52.

²⁴³ For instances in which the term “moral statistics” appeared in Europe see Society for the Education of the Poor, *Moral Statistics of the Highlands and Islands of Scotland* (Iverness, 1826); Andre-Michel Guerry, *Essai Sur la Statistique Morale de la France* (Paris, 1833), Joseph Fletcher, “Moral and Educational Statistics of England and Wales,” *Journal of the Statistical Society of London*, 10 (1847): 193-221 and 12 (1849): 151-176; In the United States, see for instance the *American Tract Society annual reports*, 1845, 73. Nahum Capen to John Davis, March 3 1849, reprinted in 30th Congress, 2nd session, miscellaneous document no 64 ; On moral statistics in general see Frank Hamilton Hankins, *Adolphe Quetelet as Statistician* (New York, 1908) chapter IV.

In her work on numeracy in Early America, Patricia Cline Cohen devoted an entire chapter to the heated battle that ensued over the supposed errors that were found in the African American insanity statistics of the 1840 census. While Cline Cohen did a masterful job of recreating this statistical spat, a crucial question was left largely unexplored: Why did the 1840 census collect, for the first time, insanity statistics and why were these figures taken so seriously by the American public?²⁴⁴ The debate over insanity figures was only one manifestation of a much larger cultural phenomena: the meteoric rise of moral statistics in Jacksonian America. From Boston medicine journals to Southern literary magazines, statistics of insanity, education, literacy, longevity, idiocy, crime, imprisonment and pauperism were wielded by both Northerners and Southerners eager to prove the “superior morality” of their society. Why?

Looking at census compilers, moral reform associations, statistical societies, insane asylums, financial journalists and many other people and institutions that played a key role in Jacksonian America’s statistic-filled discourse, this chapter examines the social forces behind the rise of moral statistics in the 1830s and 1840s. Both the bureaucratic collection as well as the cultural ascendance of moral statistics, this chapter argues, was part and parcel of the social revolution that took Jacksonian America by storm in the 1820s and 1830. Much like the sudden burst of evangelical millennialism that rocked the nation at this time, the rise of moral statistics was triggered by the massive social changes underway in the United States at that time. Be it due to urban industrialization or the internal slave trade, at the heart of this social revolution was the breakdown of the early American

²⁴⁴ Patricia Cline Cohen, *A Calculating People: The Spread of Numeracy in Early America* (Chicago: Chicago University Press, 1982) 175-205; 28th congress, 1st session, *Appendix to the Congressional Globe*, Feb. 1844, 568.

patriarchal-commercial order and the family household which undergirded it. The collection of prostitution figures, insanity statistics, pauperism rates and other moral statistics was a response to this dramatic development as moral reformers, physicians, wardens, superintendents of the poor, and clergymen sought to bring order and discipline to a society which was no longer organized by the hierarchical, customary and patriarchal relations of the small American village.²⁴⁵

As the binds of the patriarchal household and the communal village fell apart, and the American people rushed pell mell into a brave new world, a strong need emerged amongst elites for statistics that could transform these suddenly free-floating human beings into quantified objects that could be observed, monitored and, hopefully, controlled. Moral statistics, therefore, marked the birth of a new epistemological era that Michele Foucault has referred to as “biopolitics” due to its statistical objectification of the individual and society into “population.”²⁴⁶ At the heart of this new statistical order, lay two novel social institutions – reform organizations and asylums. Trace most Jacksonian moral statistics back to their creator, and you will almost always discover an annual report of a prison, an insane asylum, a poorhouse, a temperance society or some other moral reform association.

²⁴⁵ Michael Zakim, *Readymade Democracy: A History of Men's Dress in the American Republic, 1760-1860* (Chicago: Chicago University Press, 2003); Paul E. Johnson, *A Shopkeeper's Millennium: Society and Revivals in Rochester, New York, 1815-1837* (Hill and Wang, 1979); Charles Sellers, *The Market Revolution: Jacksonian America, 1815-1846* (New York: Oxford University Press, 1991); David Rothman, *The Discovery of the Asylum: Social Order and Disorder in the New Republic* (Boston: Little, Brown, 1971); Robert Abzug, *Cosmos Crumbling: American Reform and the Religious Imagination* (New York: Oxford University Press, 1994).

²⁴⁶ On “biopolitics” see Michel Foucault, *Security, Territory, Population: Lectures at the Collège de France, 1977-1978* (Basingstoke: Palgrave Macmillan, 2007). *Discipline and Punish; The History of Sexuality: Vol. I, An Introduction*, trans. Robert Hurley (New York: Vintage Books, 1978), 133-1690 and *Society Must Be Defended: Lectures at the Collège de France, 1975-1976; The Foucault Effect: Studies in Governmentality*, edited by Graham Burchell, Colin Gordon, and Peter Miller. (Chicago: University of Chicago Press, 1991).

In colonial America and the early republic, these institutions – and therefore moral statistics – were a rarity. There are two main reasons for this. First, eighteenth century Americans did not view poverty, crime, insanity, or intemperance as an indicator of a society's moral failure. Steeped in a Calvinist theology which centered on the depravity of man and God's deterministic will, most colonial Americans did not devote much time or effort to moral statistics since social phenomena such as poverty and crime were understood to be perfectly natural, unthreatening and, most importantly, unavoidable.

Secondly, the basic premise behind Jacksonian statistic-generating asylums – be they prisons, almshouses, workhouses or institutions for the insane – was that social deviants and dependents must be isolated, disciplined and controlled. Colonial Americans, however, believed that those in need of social assistance should receive such aid within the framework of a patriarchal household and that there was no need to isolate, penalize or discipline them. While public funding for a community's poor, handicap or insane was surprisingly robust in colonial America, such people were usually sent to live in a relative or neighbor's home while the community paid for their basic needs. The few almshouses and asylums that did exist were seen as last resorts in which only those who posed a direct physical threat to their community should be kept. Furthermore, these houses were run more like households than reform institutions. There was little regimented scheduling of the inmate's day and few statistical reports were ever generated.²⁴⁷

With the crumbling of the Jeffersonian patriarchal order came the Jacksonian rise of the asylum and the reform association. The first state prisons, for instance, opened in New

²⁴⁷ Rothman, *Discovery of the Asylum*, chap. 1-3; For a similar take on Canada see James E. Moran, *Committed to the State Asylum* (MQUP, 2001).

York in 1823, in Pennsylvania in 1826, in Massachusetts and Maryland in 1829, New Jersey in 1830, Tennessee in 1831, Georgia in 1832, Louisiana in 1835, Alabama in 1841.²⁴⁸

Jacksonian America was also the heyday for the construction of insane asylums, houses of correction, and other forms of poorhouses. In 1830 there was one public insane asylum in the entire country. By 1860, 28 of the 33 states had public institutions for the insane.

Between 1820 and 1840 some sixty towns in Massachusetts constructed new almshouses.

One in-depth statistical study on the poor in New York State done in 1824, a study that never would have been undertaken a few years prior, demonstrated that only 30 in a sample of 130 towns had an almshouse. By 1835, 51 out of 55 counties had at least one.

Finally, the 1820s and 1830s were the same decades in which the number of temperance, anti-prostitution and other moral reform societies across the nation exploded in number as well.²⁴⁹

While the crumbling of a patriarchal social order was undoubtedly the trigger of this institutional revolution, the political, cultural and intellectual forces that led to the creation and subsequent cultural dominance of moral statistics were uneven and somewhat contradictory. Perhaps the best way to get at these issues is to pose two distinct yet related questions. What was the relationship between the rise of moral statistics and the emergence of capitalist relations? What was the relationship between the rise of moral statistics and the emergence of Jacksonian democracy? It is these two interrelated

²⁴⁸ Edward Ayers, *Vengeance and Justice: Crime and Punishment in the 19th Century American South*; Adam Hirsch, *The Rise of the Penitentiary: Prisons and Punishment in Early America* (New Haven: Yale University Press, 1980).

²⁴⁹ Josiah Quincy, *Massachusetts, General Court, Committee on Pauper Laws* (Boston, 1821).

questions that this chapter will explore in-depth. To do so, however, we must first take a closer look at the moral statistics themselves.

From Paupers to Prostitutes: Moral Statistics in Jacksonian America

As Cline Cohen succinctly noted in her work on numeracy in early America, there existed in Jacksonian newspapers and almanacs a “keen popular concern to know how many paupers and how many millionaires there were, how many drunks and how many prostitutes, how many scholars and how many lunatics, how many Democrats and how many Whigs.” While the voting figures of Democrats and Whigs which emerged out of democratic party politics were not viewed as moral measures of societal wellbeing, the other social phenomena on Cohen’s list - paupers, millionaires, drunks, prostitutes, scholars and lunatics– undoubtedly were. Along with mortality and crime statistics, they made up the central “moral statistics” of the age. To get a better sense of how and why these moral statistics were collected and disseminated, and to see how they were often used in contradictory ways by a very different set of social actors, let us briefly address them one at a time.²⁵⁰

Paupers. In 1836, the first ever pauperism statistics appeared in the best-selling *American Almanac*, the leading statistical compendium of the day whose professed goal was to “advance the moral civilization and improvement of the country.” Demonstrating how moral statistics were making their way across the Atlantic, the initial figures the almanac cited were from Europe. They showed that the proportion of paupers in Great Britain was 1 in 6, in Holland and Belgium 1 in 7, in France 1 in 20 and in Prussia and Spain 1 in 30. By 1838, however, the *Almanac* had added the number of American paupers to the statistical

²⁵⁰Cohen, *A Calculating People*, 175-6.

tables it collected on each state, reaching the final conclusion that “paupers in all the States are few, compared with the number found in most European countries.”²⁵¹

American towns had been collecting information on the number of those in need and the cost of helping them since colonial times. Since pauperism, however, was not seen by most colonial Americans as a general indicator of social failure, colonial reports only kept track of the number of paupers and their overall expense. They lumped together all those in need, be they orphans, widows or invalids. Often the only distinction they made, which demonstrates the communal life of colonial America, was whether the person in need was a stranger to the town or not.²⁵² Only in the 1820s, when pauperism became a widespread statistical indicator of societal wellbeing, did new statistical categories begin to emerge in local town and city reports which looked to track *why* one was a pauper. The reasons given were various and included “Ignorance, Idleness, Intemperance., want of economy, imprudent and hasty marriages, lotteries, prostitution, charity.”²⁵³

While a wide swath of the American public in Jacksonian America was in agreement that pauper statistics should serve as a central measure of social progress, they were doing so for a very different set of reasons. For many urban elites, especially those tied to manufacturing interests, pauperism statistics were about creating a divide between the deserving and undeserving poor. “But what is meant by pauperism?” the first volume of the

²⁵¹ Joseph Worcester, *The American Almanac of Useful Knowledge*, 189 (1838).

²⁵² See for example “Schedule of expenditures for the maintenance of the poor of New-Castle County, from Jan. 1802 to Jan. 1803 [microform] by the Trustees of the Poor”. *Early American Imprints*, Series 2, no. 50380; “An account of the Philadelphia Dispensary [microform] instituted for the medical relief of the poor,” April 12, 1786. 17. “Act providing for the relief and support, employment and removal of the poor” quoted in *Official Papers, Printed for the Common Council of Boston* (Boston, 1822) 123.

²⁵³ Qtd in Society for the Prevention of Pauperism in New York City., *Report of a Committee on the Subject of Pauperism* (New York, 1818). By 1822 the very same organization was also writing reports on the prison system in America. See *Report on the Penitentiary System in the United States* (New York, 1822).

Bostonian *American Magazine of Useful and Entertaining Knowledge* rhetorically asked in 1835. "Not poverty merely. For poverty, joined to physical disease and debility, so as to disable a person wholly for labor, must be provided for in some way." Continuing, the magazine explained how "all English writers distinguish between poverty of the last kind and pauperism, which consists in want, idleness and crime united."²⁵⁴ Taking their cues from the English and their poor laws, pauperism statistics came to be used by many elites to foster an industrial work discipline amongst the ever increasing masses of immigrants and impoverished people they hoped would make up their work force. By 1849, statistician Nahum Capen - whose family owned more land in Dorchester, Massachusetts than any other - wrote a letter to Census Committee head John Davis, suggesting that pauperism statistics which separate those with "physical disability," and those with "bad habits" should be added to the 1850 census.²⁵⁵

Many Americans, however, did not view pauperism figures in such a way. In their hands, pauperism underwent a republican transformation. "I should be very unwilling to make the British Government a model for our legislation in republican America," declared a young James Buchanan in Congress of 1839, "the main scope and principal object of their legislation was to promote the great landed interests, that of the large manufacturers, and the fund holders of a national debt." Continuing, Buchanan asked a very different rhetorical question than the bourgeois *American Magazine* yet one that was, it appears, just as typical of the age: "Where is the country beneath the sun in which pauperism prevails to such a

²⁵⁴ *American Magazine of Useful and Entertaining Knowledge*, Nathaniel Hawthorne, Elizabeth Manning Hawthorne, eds. V. 1, 346.

²⁵⁵ Nahum Capen and Jesse Chickering, *Letters Addressed to the Hon. John Davis, concerning the census of 1849* (Washington, 1849).

fearful extent?”²⁵⁶ Using England as a euphemism for capitalist relations, rather than an exemplar of social reform and discipline, Buchanan transformed the breadth of English pauperism into a republican indicator of societal wellbeing. He was not alone. In 1834, for instance, a popular labor newspaper edited by the Workingmen’s Party’s George H. Evans, echoed Buchanan’s argument regarding the degradation of American society by showing how in one American city of 80,000 people there were over 5000 paupers.²⁵⁷ Embedded in this view of pauperism statistics was a proto-Rawlsian theory of justice: A society should not be judged by its aggregate wealth but rather by the fate of its poor.

What is more, American producers - be they farmers, artisans, small manufacturers or petit-bourgeoisie shop owners – often tended to blur the lines between pauperism and wage labor. In this uniquely American, “free labor” vernacular, a pauper was also someone who worked for wages his entire life and never reached the vaunted status of propertied independence and self employment. One of the last vestiges of a Jacksonian social vision, such a linkage between pauperism and wage labor can still be found in the 1860 census, where the compiler of the census placed crime, paupers and wages under the same statistical table.²⁵⁸ By 1870, however, the two topics would be completely separated as permanent wage labor had been reframed as a socially legitimate life path.

²⁵⁶ *Congressional Globe*, 7, 25th congress 3rd session, 209.

²⁵⁷ *The Man*, November 27th, 1834.

²⁵⁸ United States Census, *Tenth Census* (Washington, 1862) 512.

MISCELLANEOUS STATISTICS.

PAUPERISM, CRIME, AND WAGES, 1860.

STATES.	PAUPERISM.					CRIME.				WAGES.					
	Whole number of paupers supported within the year.		Whole number on 1st June.		Annual cost of support.	Whole number of criminals convicted within the year.		In prison on 1st June.		Av. monthly wages to a farm hand with board.	Av. to a day laborer with board.	Av. to a day laborer without board.	Av. day wage to a carpenter without brd.	Weekly wage, female domestic, with brd.	Price of brd. to laboring man per week.
	Native.	Foreign.	Native.	Foreign.		Native.	Foreign.	Native.	Foreign.						
Alabama	555	27	431	18	\$38,890	136	43	183	43	\$12 41	\$0 70	\$0 96	\$2 15	\$2 08	\$2 68
Arkansas	254	35	175	3	16,709	191	9	61	17	14 25	78	1 04	2 24	1 91	2 48
California	613	1,570	105	188	99,171	345	570	336	546	33 28	1 90	2 62	4 43	7 45	6 25
Connecticut	2,331	1,513	1,548	690	198,355	635	818	449	197	15 11	88	1 15	1 68	1 50	2 61
Delaware	551	191	331	116	22,830	63	.....	19	8	10 66	61	87	1 49	92	2 05
Florida	152	16	105	2	4,654	24	9	13	2	14 29	76	1 16	2 41	2 32	3 58
Georgia	1,408	43	1,106	90	45,161	217	34	77	34	11 95	63	89	2 00	1 67	2 22

Figure 8: Pauper Statistics. A page from the 1860 census reveals how pauperism and wages were tightly linked in the minds of antebellum Americans. United States Census, *Eighth Census*, 512.

Millionaires: While statistics regarding the super-rich many not seem like they fit the category of moral statistics, in Jacksonian America they were often framed as such. What is more, they usually took the same route as pauper figures: a nascent capitalist elite used them in one way, while republicanist, “free labor” producers in quite another. Moses Yale Beach, a cabinetmaker turned manufacturing mogul, began publishing a yearly pamphlet in the 1840s detailing “an alphabetical arrangement of persons estimated to be worth \$100,000 and upwards” in New York City. Linking capital gains to moral self-worth, Beach’s precursor to the Forbes 500 added brief biographical sketches of “the more remarkable men and families in this community...who by honest and laborious industry have raised themselves from the obscure and humble walks of life, to great wealth and consideration.” In his concluding statement, Beach noted that “in a country where money, and not title, is the standard by which merit is appreciated, it is desirable to adjust the standard with as much exactitude as possible.”²⁵⁹

²⁵⁹ Moses Yale Beach, *Wealth and Pedigree of the Wealthy Citizens of New York City* (New York, 1842), 1. The 1840s appears to be the decade where such statistics took off as similar books were published in Boston, Philadelphia and Brooklyn. See City Document No. 12, *List of Persons, Copartnerships and Corporations who*

In an attempt to smooth over the class conflicts of the age, however, Beach made sure to add that “the public” could use these statistics to critique certain forms of wealth by distinguishing those “whose fortunes have been acquired in a more *equivocal* manner.”²⁶⁰ Beach had good reason to infuse some populist ethics into his statistical list. He must have been aware of the fact that many New Yorkers did not view millionaires in the same effusive manner he did. “Power and wealth are continually stealing from the many to the few,” Locofoco leader William Legget pointedly noted a few years prior.²⁶¹ “With every year the state of society in the United States will more approximate to the state of society in Great Britain,” argued anti-banking advocate William Gouge. “Crime and Pauperism will increase. A few men will be inordinately rich, some comfortable, and a multitude in poverty.”²⁶²

Mainstream political leaders outside of New York City contrasted the rise of great wealth and great destitution as well. In his tirade against the national bank, for instance, Missouri Senator Thomas Hart Benton noted how it “tends to aggravate the inequality of fortunes, to make the rich richer and the poor poorer; to multiply the nabobs and paupers.”²⁶³ Adhering to the tenets of patriarchal commercialism, farmers, artisans and other petty commodity producers viewed the number of millionaires as a *negative* social

were Taxed Twenty-Five Dollars and Upward, in the City of Boston in The Year 1847 (Boston, 1848); Merchant of Philadelphia, *Memoirs and Autobiography of some of the Wealthy Citizens of Philadelphia with a Fair Estimate of their Estates* (Philadelphia, 1846); John Lomas, *The Wealthy Men and Women of Brooklyn and Williamsburg* (Brooklyn, 1847).

²⁶⁰ Beach, *Wealth and Pedigree*, 2.

²⁶¹ *A Collection of the Political Writings of William Legget*, Theodore Sedgwick, ed. (New York, 1840) 66.

²⁶² William Gouge, *A Short History of Paper Money and Banking in the United States* (New York, 1833) 140.

²⁶³ Benton quoted in Theodore Roosevelt, *Thomas Hart Benton* (New York, 1887) 121. In typical Progressive-era style, Roosevelt was not a fan of this remark and called it a “rant.”

indicator because they saw equality as the ultimate measure of a thriving society. According to the zero-sum rules of this economic ideology, if men were becoming millionaires this could only be because they had exploited others, or had received “monopoly privileges.” A belief in the equivalence of trade and the labor theory of value simply left no room to explain massive accumulation of wealth in any other way.²⁶⁴

This was not the only reason many Americans disliked the use of millionaires as a benchmark of progress. Equating capital gains with self-worth, Beach had turned money into the basic “standard by which merit is appreciated.” In Jacksonian America, however, many farmers, journeymen and yeomen were distancing themselves from the very notion that money somehow reflected true, intrinsic value. In previous chapters, we saw how early American artisans and farmers such as Ben Franklin, George Logan and Thomas Paine sincerely believed that, thanks to the equivalence and justice inherent in market exchange, money prices served as a direct reflection of the amount of labor that went into a commodity. Thanks, however, to sharp inflation on basic goods and housing costs, depreciating bank notes, meager wages, bubble land prices and a monopolistic national bank, by the 1830s many Americans were quickly losing faith in the free market and with it the notion that money was a just representative of value.²⁶⁵ Rejecting the wages that the supposed free market offered them, urban labor leaders such as Langdon Byllesby began to organize voluntary labor unions in an attempt to fix wages “according to the average time

²⁶⁴ Wilentz, *Chants Democratic*; Sklansky, “William Leggett and the Melodrama of the Market,” in *Capitalism Takes Command*, edited by Michael Zakim and Gary Kornblith.

²⁶⁵ For the economic troubles of the Jacksonian era see Sellers, *Market Revolution*; Schlesinger, *Age of Jackson*; Temin, *Jacksonian Economy*; Wilentz, *Chants Democratic*.

required for the making of an article.”²⁶⁶ Anti-banking men such as Gouge came to question Beach’s argument that priced wealth equaled social progress. “Men are brought to consider wealth as the only means of happiness,” he lamented. “Hence they sacrifice honor, conscience, health, friends, everything to obtain it.” Continuing, he compared New York businessmen to “the magpie, [who] in hiding silver spoons in its nest appeared to act with as much reflection as they do in piling money-bag on money-bag. They have no object in view beyond accumulation.”²⁶⁷ Gilbert Vale, a fellow New York reformer, also concluded that the government “should regard the *happiness* of the people, while political economy only regards the wealth of the nation.” Vale urged American economic thinkers to not “merely regard the accumulation of wealth at the expense of moral principles, health or rational refinement of the family.”²⁶⁸

Drunks: When the temperance movement took off in the late 1820s, so did intemperance statistics. Much like the temperance movement itself, this was not an entirely novel affair. In the 1790s, physician and temperance advocate Benjamin Rush drew a broadside of a “moral and physical thermometer” which charted the “scale of the progress of temperance and intemperance.” Much like future moral statistics – and Rush can be seen in many ways as the father of American moral statistics – the categories on Rush’s thermometer focused on physical, social and mental well-being. Those who drank water or even beer had “health and wealth” which was defined as “serenity of mind, reputation, long life, and happiness.” On the other hand, those who drank heavier liquors fell victim to

²⁶⁶ Byllesby qtd in Joseph Dorfman, *The Economic Mind in American Civilization* (New York, 1946) 1:638.

²⁶⁷ Gouge, *History of Paper Money and Banking*, 97.

²⁶⁸ Vale qtd in Joseph Leon Blau, *Social Theories of Jacksonian Democracy: Representative Writings* (New York: Hafner, 1974) 237.

idleness, gaming, fighting, lying, sickness, debt, jail, black eyes and rags, madness, despair and, finally, the gallows.²⁶⁹

By the late 1820s, Rush's thermometer was being supplanted with, as one historian of moral reform has noted, a "striking" amount of intemperance statistics.²⁷⁰ Amherst College President Heman Humphrey, for instance, used statistics to prove that the prevalent use of ardent spirits in the United States was "a worse evil at this moment than the slave-trade ever was, in the height of its horrible prosperity." Seeking to compare the "aggregate of misery" brought on by intemperance and the slave trade, Humphrey filled numerous pages with complex calculations based on intemperance data mostly taken from Unitarian minister John Gorham Palfrey's Brattle Square Church sermons. In doing so, Humphrey reached the conclusion that while the slave trade brought twenty five to thirty thousand people "into bondage," intemperance brought thirty six thousand. Continuing, he cited mortality statistics in order to argue that while ten to fifteen thousand had annually died due to the slave trade, thirty six thousand lost their lives to alcohol each year. "Thus, where the slave trade opened one grave," Humphrey concluded, "hard drinking opens three."²⁷¹

²⁶⁹ Benjamin Rush, *An Inquiry in the Effects of Spirituous Liquors on the Human Body* (Boston, 1790); Temperance Statistics were fairly popular in the *American Almanac*, see for instance 1831 edition, 304 which listed how many die from hard drinking.

²⁷⁰ Abzug, *Cosmos Crumbling*, 90-99.

²⁷¹ Humphrey cited in Abzug, *Cosmos Crumbling*, 93-96

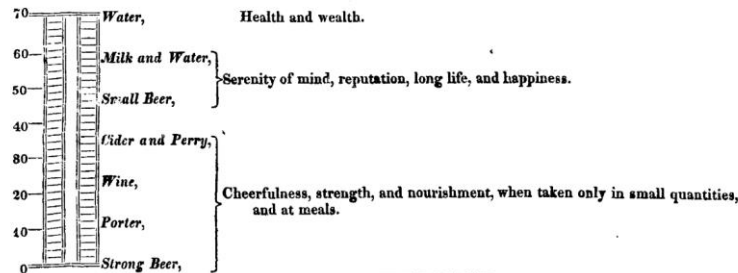
The Drunkard's LOOKING-GLASS;

OR

MORAL AND PHYSICAL THERMOMETER.

A Scale of the progress of Temperance and Intemperance.----Liquors with effects in their usual order.

TEMPERANCE.



INTEMPERANCE.

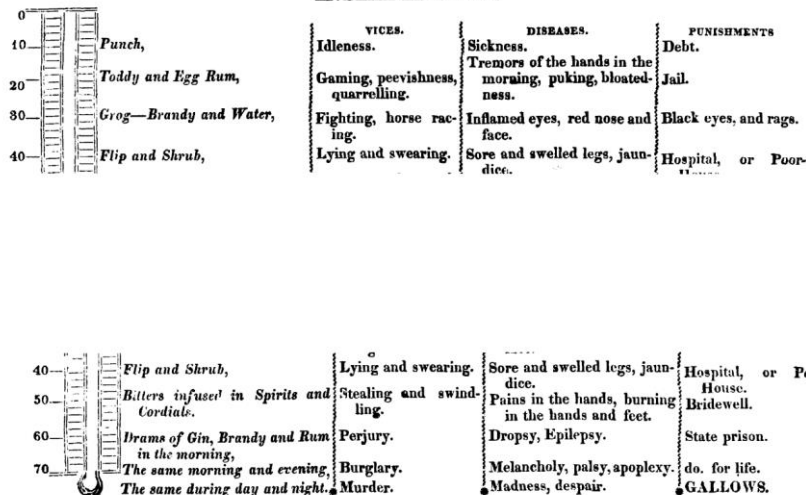


Figure 9: Benjamin Rush's Moral and Physical Thermometer. Benjamin Rush, *An Inquiry in the Effects of Spirituous Liquors on the Human Body* (Boston, 1790).

Humphrey's calculations were hardly unique. At some point in most temperance sermons or organizational reports of the era, statistics were cited. In 1831, for instance, religious leaders in Boston created a table seen below which tracked the number of members that had been ex-communicated by their respective congregation due to

intemperance.²⁷² In 1832, moral reformer Theodore Dwight Weld displayed the full gamut of moral statistics in a single sermon by pulling out of his pocket, mid-speech, a series of statistics he had created by extrapolating onto all of American society the statistical findings of a single city. Reading from his back-of-the-envelope calculations, he declared that of the 300,000 drunks in America, 30,000 would die every year; that of the 200,000 paupers, half had alcohol to blame for their problems; and of the 30,000 committed to insane institutions, half had gone crazy due to drinking. Finally, he noted that "an inventory of all the murders committed in the land for a single year" revealed that "99-100th of them were committed by intoxicated men."²⁷³

Churches.	Years.	Whole No. of ex-communications.	For intemperance.	Whole number of confessions.	For intemperance.	Now under, or died while under discipline for intemperance.	Cut off on other charges, but soon became intemperate.	Ministers intemperate.	Notes.
No. 1	28	3	1	10	5				a
No. 2	18	5	1	15	7				
No. 3	50	0	0	1	1				
No. 4	12	3	2	3	2				
No. 5	29	3	3	0	0				
No. 6	12	1	1	1	1				
No. 7	16	8	7	0	0				
No. 8	20	5	1	0	0				
No. 9	45	6	6	0	0				
No. 10	50	0	0	5	3				
No. 11	50	4	2	3	2				
No. 12	50	5	2	1	0				
No. 13	12	13	6	7	3	1			
No. 14	50	47	24	24	4				b

Figure 10: Church temperance statistics. This table from Boston depicts the number of intemperate members at different church and how many confessed or were ex-communicated by the community. Barbour, *Influence of Intemperance on the Churches*, (Boston, 1831).

²⁷² Isaac Richmond Barbour, *A Statistical Table Showing the Influence of Intemperance on the Churches* (Boston, 1831).

²⁷³ Weld qtd in Abzug, *Crumbling Cosmos*; 96.

Temperance statistics were undoubtedly intended to instill within urban journeymen and laborers, who no longer lived or worked along side their bosses, the same industrial and capitalist discipline that their masters-turned-manufacturers had begun to internalize in the 1820s.²⁷⁴ Nevertheless, it is important to recognize that the focus of these statistics – much like Rush’s thermometer - remained squarely on the well-being of the drinker himself. While these moralizing temperance figures dominated the scene in the 1830s, a look at an alternative type of temperance figures emerging in this era allows us to see the crucial differences between moralizing statistics and capitalizing ones.

In 1830, the newly founded New York State Temperance Society, which was led not by religious figures but rather wealthy Albany businessmen like Edward Cornelius Delavan, articulated the social damage wrought from drinking, not by detailing the fate of the drinkers themselves as most temperance figures of the era did, but rather by pricing the overall cost drinking would have on society writ large. “There cannot be a doubt,” the society’s first report concluded, “that the city suffers a dead yearly loss of three thousand dollars” from “time spent drinking,” “expenses of criminal persecutions,” and “loss to the public by carelessness” of the drunkards. Treating the consumption of alcohol as a social tax, these Albany businessmen, who had made much of their fortune from urban land markets, used temperance figures to do what they did best: capitalize space. “At the present value of money,” they argued, “the tax the city of Albany pays to alcohol would pay the

²⁷⁴ See Johnson, *Shopekeeper’s Millennium* for the relationship between temperance and the emerging capitalist relations between boss and employee.

interest on six million of dollars yearly; would build 200 houses each year costing 1500 dollars each; and rent 2000 tenements at 150 dollars rent per year.”²⁷⁵

Transforming people into income generating units of cash, into human capital, these temperance statistics serve as a bellwether for the capitalizing statistics that would take America by storm in the 1850s. Drinking became bad not because it was immoral and ruined lives but rather because it was unproductive and ruined market maximization by cutting into a society’s bottom line. By the late 1840s, when moral statistics had begun, as we shall see, their precipitous cultural decline, these capitalizing temperance statistics began moving from the fringes to the mainstream. In 1846, for instance, the businessmen of the booming manufacturing town of Portsmouth, New Hampshire calculated that “the time lost by the purchasers [of whiskey], including years of the latter part of their lives in which they generally are perfectly useless” was equal to \$26,292.²⁷⁶ Others of the era even capitalized drinking on a national scale, calculating that the \$9 million lost to drinking “would buy up all the houses, lands, and slaves in the United States every five years.”²⁷⁷

Prostitutes: In 1830, Reverend John McDowall moved to New York City to do missionary work in the slums of Five Points. Going from brothel to brothel, he began to collect statistics on the number of prostitutes. At the end of the year, McDowall founded the New York Magdalen Society and published his findings, which claimed that there were an astonishing 10,000 prostitutes in the city and that their clientele consisted of some of New

²⁷⁵ *Circular of the New York State Temperance Society, to the Citizens of the State* (Albany, 1830).

²⁷⁶ Alfred V. Haven, Richard Jeness, Committee appointed to ascertain statistics of intemperance *Statistics of Intemperance in Portsmouth* (Portsmouth, 1845).

²⁷⁷ Qtd in Sellers, *Market Revolution*, 265.

York's finest gentlemen.²⁷⁸ While the controversy over McDowall's figures led to the closing of his society, his report became the opening drop in a torrent of Jacksonian prostitution statistics. A "census of prostitutes," became a frequent occurrence in growing Jacksonian cities such as New York, Cincinnati and Philadelphia, whether they were conducted by government institutions like the New York Board of Alderman, moral reform organizations like the Magdalen Society, local police departments, magazines such as the *Journal of Public Morals*, sensational journalists or crusading individuals such as John McDowall.²⁷⁹

For the staid and elite reformer, prostitution figures were often viewed simply as indicators of "licentiousness" and "moral depravity," and the women themselves were usually blamed for having "fallen." Depicting prostitutes in his diary as having "thief written in their cunning eyes and whore on their depraved faces," wealthy men like George Templeton Strong tended to explain the rise of prostitution with arguments that focused on the intrinsic weakness of women of the lower classes.²⁸⁰ Other New Yorkers, however, viewed prostitution as a structural, economic problem. After reading McDowall's stunning statistical reports, for instance, *The Sun* linked sexual exploitation to economic exploitation, noting that the increase in "licentiousness" was due to the low wages of female servants and the "unjust arrangement of remuneration for services performed." In his sensational

²⁷⁸ For more on McDowall see *Encyclopedia of Prostitution and Sex Work*, ed. Melissa Hope Ditmore (Westport, Conn: Greenwood Press, 2006) 293; For his statistics see *McDowall's Journal*, Feb-May 1834, *passim*; *Annual Report of the New York Magdalen Society* (New York, 1830).

²⁷⁹ For other prostitution censuses see "Report by the New York Female Reform Society" in Butt Ender, *Prostitution Exposed* (New York, 1839); *Licentiousness, its Effects and Causes* (Boston, 1846); For Cincinnati's "census of Prostitutes" see Cincinnati Daily Gazette, Dec 13th, Dec 15th, 1858. For an excellent list of sources containing prostitution statistics see Timothy J. Gilfoyle, *City of Eros: New York City, Prostitution, and the Commercialization of Sex, 1790-1920* (New York: W.W Norton, 1994) 57-59.

²⁸⁰ George Templeton Strong's qtd in Stephen Garton, *Histories of Sexuality: Antiquity to Sexual Revolution* (New York: Routledge, 2004).

book *New York Naked*, George G. Foster voiced the same conclusion, noting “female prostitution is the direct result of the inadequate compensation for female labor.”²⁸¹

The idea that prostitution could serve as an economic indicator of societal wellbeing led some reformers to greatly expand the scope of McDowall’s initial project, in hopes of uncovering the reasons behind the social phenomenon. Written as an official report to the New York City Board of Almshouses Governors, William Sanger’s mammoth *History of Prostitution* included a wide-ranging statistical survey which included data regarding prostitutes’ health, literacy rates, age, life expectancy, place of birth, average weekly earnings, their trade or calling prior to prostitution, and even their father’s occupation or business. In Sanger’s narrative, intrinsically good yet poverty-stricken women had been forced into prostitution due to outside influences, as the “last spark of inherent virtue flickers and dies in her bosom,” and the prostitute’s “mind becomes tainted with the moral miasma in which she lives.”²⁸²

While Sanger mentioned religious and social causes as well, his statistical analysis mostly blamed economic developments for the rise of prostitution in New York. He discovered, for instance, that roughly 85 percent of the women he spoke with noted that prostitution was their “only means of support,” and that roughly half had been working as domestic servants beforehand, under conditions that “would bring a blush to the cheek of the southern slave driver.” Like those who looked at pauperism as a republican gauge of societal wellbeing, Sanger placed the brunt of the blame for prostitution on the importation of English forms of social relations to America. “Study the moral statistics of any of the

²⁸¹ *The Sun* and Foster in Gilfoyle, *City of Eros*, 59.

²⁸² William Sanger, *History of Prostitution* (New York, 1858) 451.

manufacturing towns in Great Britain or on the Continent of Europe,” he concluded, “and the same results are presented, but in more alarming degree.”²⁸³

Scholars. In 1840, education statistics appeared in the census for the first time. The census marshals were instructed to count the number of students and scholars in primary, grammar and common schools as well as universities, colleges and academies. Along with literacy rates, these education figures were fast becoming a central benchmark for measuring a society’s progress. For example, *The Liberty Almanac*, a key source of anti-slavery statistics in the Jacksonian era, made sure to point out in an article titled “Slave Power – Morally” that in Connecticut 1 out of 568 persons was illiterate while in Virginia it was 1 in every 12.5. “Ohio alone had 51,812 scholars - more than are to be found in thirteen Slave States!” the almanac continued, adding that “her neighbor Kentucky had 429!!”²⁸⁴ What the almanac did not point out, however, was that literacy and education data had only been collected on whites. Apparently, no one in the census bureau had felt the need to check the educational status of African-Americans – be they free or enslaved.

A main stimulus for the rise of education statistics was undoubtedly the work of Boston education reformer Horace Mann, who in 1837 was appointed the secretary of the newly created Massachusetts Board of Education - the first such institution in the United States. With no real regulatory or funding power, yet required to submit an annual report, Mann turned to statistics. Traversing through the state, he counted the number of libraries,

²⁸³ Sanger, *History of Prostitution*, 458.

²⁸⁴ “The Slave Power – Morally,” *The Liberty Almanac* (New York, 1849) 40.

mechanics institutes (and whether they had reading rooms), lyceums, literary societies and the associations that gave public lectures.²⁸⁵

Circulated widely in the United States, Mann's reports became the bureaucratic foundation for modern education reform in the United States. The values which shaped these statistical reports were varied if not contradictory. On one hand, when seeking to define the standards with which progress should be measured, Mann's reports contained a clear critique of a capitalist worldview. "Let us thank heaven," he noted in his twelfth report, "that there are other standards of greatness besides vastness of territory and other forms of wealth besides mineral deposits or agriculture exuberance." Criticizing those who focused only on the "resources" of a nation, he noted that unlike material wealth, "the realm of intelligence, the sphere of charity, the moral domain in which the soul can expand and expatiate, are illimitable."²⁸⁶ Mann often took shots at how classical economics' "heathen standards" measured "human welfare," while stressing his own emphasis on equality:

According to the European theory, men are divided into classes – some toil to earn, others seize to enjoy. According to Massachusetts theory, all are to have equal chance for earning and equal security in the enjoyment of what they earn. The latter tends to equality of condition, the former to the grossest inequalities. Tried by any Christian standard of morality or even by any of the better sort of heathen standards, can any one hesitate, for a moment, in declaring which of the two will produce the greater amount of human welfare?²⁸⁷

²⁸⁵ Horace Mann, *Third Annual Report of the Board of Education* (Boston, 1840) 50-56, 74-78; *Sixth Annual Report* (Boston, 1843), 55; For two very different takes on the reform work of Horace Mann see Jonathan Messerli, *Horace Mann: A Biography* (New York: Knopf, 1972) and Michael Katz, *Class, Bureaucracy, and Schools* (New York: Praeger Publishers, 1971). For a good look at how these two works differ see Katz's review of Messerli; "Horace Mann: What Went Wrong," *Reviews in American History*, 1 (1973): 218-223.

²⁸⁶ Mann, *Twelfth Annual Report of the Board of Education* (Boston, 1849), 32.

²⁸⁷ Mann, *Twelfth Report*, 54.

Mann also wielded pauperism statistics much like the Jacksonian masses. “The brilliant conception which symbolizes the nation of Great Britain as a superb temple,” he contended, “is turned into a loathing scorn when we behold the five million paupers that cower and shiver at its base.” Continuing, he channeled the anti-growth sentiments of Jefferson and Franklin by using population density statistics to argue that school reform was crucial in the Bay State because Massachusetts was “four or five times more dense than the average of all the other states, and density of population has always been one of the proximate causes of social inequality.”²⁸⁸

Yet in the very next passages of his twelfth report, Mann presented a set of very different reasons as to why his education statistics should serve as indicators of American progress. Here, we see not Horace Mann the moral reformer but rather Horace Mann the booster who had been one of the leading figures in lobbying for railroads in the 1830s. “Beyond the power of diffusing old wealth,” Mann begins, “[education] has the prerogative of creating new [wealth]...and adds a thousand fold more to a nation’s resources than the most successful conquests.”²⁸⁹ Such statements can be read as the inchoate seeds of modern “human capital” theory: Education is important not because it levels the playing field or creates better citizens but rather because it boosts market productivity. Not stopping here, Mann backed up his argument with a statistical observation: In 1740, the whole amount of iron made in England and Wales was 17,000 tons while in 1840 it was over one million. This magnificent growth, Mann suggested, was largely due to the fact that

²⁸⁸ Mann, *Twelfth Report*, 56.

²⁸⁹ Mann, *Twelfth Report*, 60.

the British workforce of today is far more educated, and therefore productive, than that of yesteryear.²⁹⁰

Lunatics: The biggest scandal in the history of the American census was in the 1840s, and it was over how many African American lunatics there were in the north. That lunacy rates were at the center of such a political firestorm should not be surprising since mental health was of the most burning issues in Jacksonian America, as the establishment of dozens of insane asylums across the nation suggests. The story behind the scandal is straightforward enough: Edward Jarvis, a struggling physician from Massachusetts with a penchant for statistical analysis, published an article in a leading medical journal in 1842 in which he revealed that according to the 1840 census the proportion of blacks suffering from insanity was far higher in the North than in the South.²⁹¹ In Maine, for instance, a stunning 1 out of 14 African Americans was listed as insane or idiotic while in Louisiana it was 1 out of 4,310. At first Jarvis accepted these figures and explained them by noting that “slavery has a wonderful influence upon the development of moral faculties and the intellectual powers” of blacks since it insulates such feeble minds from the “responsibilities which the free, self-thinking and self-acting enjoy and sustain.”²⁹² Apparently, however, Jarvis was still unconvinced that such striking differences were accurate. He decided to go over the actual census marshal reports that had been created before the figures were aggregated into statistical tables in Washington. Much to his surprise, Jarvis discovered

²⁹⁰ Mann, *Twelfth Report*, 63.

²⁹¹ For an excellent biography of Jarvis see Gerald Grob, *Edward Jarvis and the Medical World of the Nineteenth Century* (Knoxville: University of Tennessee Press, 1978).

²⁹² Edward Jarvis, “Statistics of Insanity in the United States,” *Boston Medical and Surgical Journal*, 27:7 (Sept 21, 1842).

enormous discrepancies. He quickly published a second article, in the same journal, and announced that the figures were all wrong. By then, however, it was too late.²⁹³

Recognizing the powerful sway that moral statistics had in both the North and in Europe, and as avid collectors and disseminators of moral statistics in their own right Southerners did not miss an opportunity to stake a claim for the moral superiority of their peculiar institution. First, an anonymous writer sent a short article to *Hunt's Merchants Magazine* revealing the stunning discrepancies in northern and southern black insanity statistics. (The fact that a business magazine was interested in such figures is further evidence of the widespread authority moral statistics had in the early 1840s.) Then, in the summer of 1843, the *Southern Literary Messenger* published a detailed article that revealed in these statistical findings. "Insanity arises," the journal argued, "most frequently from moral causes."²⁹⁴ After citing some examples from Germany, England and France on how insanity rates jumped during the Napoleonic Wars, the article carefully went over the statistics generated by lunatic asylums in Massachusetts, Ohio and Virginia which had appeared, as moral statistics often did, in the 1843 edition of the *American Almanac*. These statistics, which were typical of Jacksonian insane asylums, demonstrated that of the 1284 men and women who had been committed, 879 had been driven insane from "moral causes" which included "domestic affliction, religious feeling, grief for loss of property, fright, disappointed affection and jealousy." Convinced that they had effectively linked insanity to morality, the article returned once more to the 1840 census results. "Dreadful indeed are the evils," the article concluded, "that produce a maniac in every 34 of the

²⁹³ *Ibid.* 27:17 (Nov 30, 1842).

²⁹⁴ "Reflections on the Census of 1840," *Southern Literary Messenger*, 9 (Jun, 1843): 340.

population.” The same figures, the article continued, prove that blacks are “not only happier in a state of slavery than of freedom, but we believe the happiest class on the continent.”²⁹⁵

The seemingly objective conclusions of the *Southern Literary Messenger* reverberated through American society like a tidal wave. From that point on, southern leaders such as John Calhoun would endlessly cite the 1840 census insanity figures while Northerners like Edward Jarvis and John Quincy Adams, as well as the newly founded American Statistical Association, battled tirelessly to have the errors of the census officially acknowledged. What is evident from this statistical spat is how both Northerners and Southerners deeply believed in the ability of moral statistics such as insanity rates to serve as the benchmarks for societal progress. A closer look at why these insanity statistics were so widely respected reveals the anxieties that existed in Jacksonian America regarding the rise of American capitalism.²⁹⁶

Much like poverty, colonial Americans did not spend much time worrying about mental health. They believed that God’s will, not society, had driven certain people to madness. By the 1830s, however, there was widespread agreement that mental illness – as well as most other diseases – were often brought on by social forces of moral corruption. In an era before the germ theory became hegemonic, the causal linkages between disease and society, health and culture, as well as wellbeing and morality were believed to be very strong.²⁹⁷ As a result, physicians saw themselves not only as doctors but also as moral and

²⁹⁵ “Reflections on the Census of 1840,” 342, 350.

²⁹⁶ On the battle to correct these figures see Cohen, *Calculating People*, chap 6.

²⁹⁷ Grob, *Edward Jarvis*, chap 1.

social reformers whose job it was to improve the conditions under which Americans lived. Along with Jarvis, who ran a private asylum in Boston, Samuel Woodward - head of the Worcester Lunatic Hospital - was the leading expert on insanity in America. His statistical calculations led him to conclude that the United States was ranked fourth among all the countries in the world in the proportion of lunatics. Why was America ranked so high? Writing in the aftermath of the panic of 1837, for Woodward the answer was clear: "Overtrading, debt, bankruptcy, sudden reverses, disappointed hopes."²⁹⁸

Jarvis argued for similar causes. Recall that he had initially thought that it was utterly plausible that black insanity rates in the North would be much higher than in the South since southern slaves (according to Jarvis) lived in an old, paternalist, and patriarchal world while northern free blacks were forced to deal with the freedom that comes along with the rise of wage labor and the destruction of a hierarchical social order. "In this country," Jarvis once noted, "where no son is necessarily confined to the work or employment of his father, but all the field of labor, of profit, or of honor are open to whomever will put on the harness, all are invited to join the strife for that which may be gained by each."²⁹⁹ As the theories of Woodward and Jarvis reveal, every time insanity statistics were cited, mentioned or used, a powerful cultural argument was brought to the fore: capitalism was stressful, and it could drive you crazy.

²⁹⁸ Samuel Woodward, *Tenth Annual Report of the Trustees of the State Lunatic Asylum at Worcester, Massachusetts* (Boston, 1842); Rothman, *Discovery of the Asylum*, 116.

²⁹⁹ Jarvis quoted in Rothman, *Discovery of the Asylum*, 115.

A Shopkeeper's Statistics: Lemuel Shattuck and the American Statistical Association

"This day 19 years ago I was born into this world a sinner, possest of that principle which is opposed to God and his government; totally depraved in all my actions, desires and affections." That is the opening line of the diary of Lemuel Shattuck, founder of the American Statistical Association and the man who did more to spread the gospel of moral statistics in America than anyone else. Like many Americans of his day, by the 1830s Shattuck had undergone a religious transformation: No longer did he focus on the depravity of mankind but rather on its potential for perfectibility. A do-gooder who harnessed moral statistics for an array of different social causes, to understand Lemuel Shattuck is to understand the conflicting social forces that made moral statistics the most widespread measures of social progress in Jacksonian America.³⁰⁰

Shattuck grew up in the town of New Ipswich in rural New Hampshire, where he lived until 1816. After leaving home, he headed west and earned a living as a teacher in Troy, Albany and the frontier town of Detroit. While in Detroit, he did what many moral reformers of the age were doing and organized and ran the first Sunday school in Michigan. In 1823, however, he returned to New England to join his brother in running a general store in Concord, Massachusetts. After doing quite well as a storekeeper and book

³⁰⁰ "Lemeul Shattuck Diary," Lemeul Shattuck Papers, Massachusetts Historical Society. Little has been written on Shattuck. See Barbara Rosenkrantz, *Public Health and the State: Changing Views in Massachusetts, 1842-1836* (Cambridge: Harvard University Press, 1972); Walter F. Wilcox, "Lemeul Shattuck, Statist, Founder of the American Statistical Association," *Journal of the American Statistical Association*, 35 (1940): 224-235; Paul Fitzpatrick, "Statistical Societies in the United States in the Nineteenth Century," *The American Statistician*, 11.5 (1957): 13-21; Fitzpatrick, *Leading American Statisticians in the Nineteenth Century*, *Journal of the American Statistical Association*, 52 (1957): 301-321.

publisher, Shattuck retired in the 1830s, moved to Boston, and began his long and illustrious career as the undisputed father of moral statistics.³⁰¹

A man with, as one friend once noted, “an incipient taste for antiquarian matters,” it was Shattuck’s work as Concord’s local historian which first led him into the world of numbers and statistics.³⁰² While writing and researching on the history of Concord, Shattuck became interested in the emerging world of “vital statistics” after he discovered that the local government’s registration of births, deaths and marriages was entirely inadequate. Aware of the fast-developing field of vital statistics on the other side of the Atlantic (between 1825 and 1838 societies for the collection of vital information were founded in eleven English cities, six French ones and countless others across Germany and Scandinavia) Shattuck reached out to a number of statisticians in Europe, including the Register General of England and the Statistical Society of London, for assistance in creating a “new system of registration” in the United States. This was the beginning of a long friendship with many European statisticians. Corresponding over the next decade with physicians in Hamburg on bills of mortality, bureaucrats in Belgium about census questions, and the world famous statistician Adolphe Quetelet regarding cholera maps and public hygiene, Shattuck continued to be greatly influenced by the data being collected on the other side of the Atlantic.³⁰³

³⁰¹ Wilcox, “Lemuel Shattuck”.

³⁰² Elisha Fuller to Lemuel Shattuck, Oct. 17th, 1849. Shattuck Papers.

³⁰³ Shattuck to JH Lister, Register General of England, Feb 20 1839; Shattuck to Edmonds, Jun. 29 1839, Shattuck to Adolphe Quetelet, Aug 27 1849; Shattuck to Dr. Rothenberg, Aug 21st, 1849, March 14th 1850, Lemuel Shattuck Papers. On the emergence of vital statistics in Europe see Libby Schweber, *Disciplining Statistics: Demography and Vital Statistics in France and England, 1830-1885* (Durham: Duke University Press, 2006); *The History of Statistics: Their Development and Progress in Many Countries*, ed. John Koren (New York: Macmillan, 1918)

Inspired by the goings-on in Europe, Shattuck helped found the American Statistical Association (ASA) in 1839 with four other Bostonians. Among them was the physician who founded the Perkins School for the Blind, the Massachusetts Registrar of Probate, and a clergyman interested in genealogical affairs. Along with Edward Jarvis, who would serve as the President of the ASA for 31 years, Shattuck set the tone for the American Statistical Association through the 1840s as it focused most of its energies on the collection of vital and moral statistics. Mixing an antiquarian's interest in genealogical information, a physician's interest in public health and a clergyman's moralizing concerns, the primary goal of the ASA was, as one leading member noted, to examine "the physical condition of the people, their morals, their education, their civil institutions, and their future prospects."³⁰⁴ Except for a few representatives from the emerging life insurance business who immediately saw the great pecuniary potential mortality statistics could have on their precious life tables, the men who patronized the ASA did not try to turn their statistics into money-making tools. The first-ever lecture, given by Shattuck, was on the vital statistics of Saxony. Another early talk was on the number of carriages in Massachusetts in 1756. Besides sending a memorial to Congress regarding the errors in the 1840 census, the ASA also lobbied for better hospital statistics, a state committee to improve the collection of vital statistics, a sanitary commission to improve Boston's public health and a decennial city census for 1845.³⁰⁵ Shattuck soon discovered that the city of Boston was more than willing to grant him his wishes. In 1845 he was chosen to execute a city census. In 1850, he headed a commission on the public health of Boston.

³⁰⁴ Jesse Chickering, *A Statistical View of the Population of Massachusetts* (Boston, 1846) 3; Koren, *History of Statistics*, 6; Wilcox, "Lemeul Shattuck"; Fitzpatrick, "Statistical Societies in the United States."

³⁰⁵ Koren, *History of Statistics*, 7;

Shattuck's 1845 city census became the standard upon which all city censuses in America were judged. Other cities, even Charleston and New Orleans in the South, soon recreated near carbon copies of his census in their own towns.³⁰⁶ Shattuck's greatest innovation in the 1845 census was his decision to make the individual – not the family – the basic unit of analysis. For the first time ever, Americans who opened the door to the census marshal were required to answer a series of questions not only regarding the paterfamilias, but *all* those who resided in the home. Such an emphasis on the individual was no coincidence. Moral statistics placed the individual - be it a pauper, prostitute, convict or scholar - at the center of society. Here we see strong evidence that Michele Foucault's theory on the rise of "biopolitics" was spot on - only when the family household broke down did the human subject become the central statistical object of society.³⁰⁷

While Shattuck's novel focus on the individual may appear to be the work of an atomizing capitalist society, this was not entirely the case. It is true that capitalist relations, such as wage labor, played a crucial role in the break up of the patriarchal society and the emergence of a free floating society of "individuals." That said, however, we must not rush to conflate capitalism with individualism. First off, as we shall see in the following chapter, the basic statistical unit for those who internalized a capitalist worldview in this era was not the individual, but rather the dollar. Secondly, and crucially, capitalist economic indicators did not place the individual at the center of their quantitative vision but rather aggregate market output and priced productivity. Even when the individual did serve as the unit of measure, like in per capita productivity statistics, human beings were still being

³⁰⁶ *De Bow's Review's* noticed how these southern censuses were identical to Shattuck's. "Productive Energies and Spirit of Massachusetts," *Debow's Review*, 4 (1847):459-474.

³⁰⁷ See fn 7 for Foucault; See also Zakim, *Readymade Democracy* on rise of "individualism."

quantified as inputs of production, mere functionaries to society's main goal of capital accumulation and market growth.

In looking for the social forces behind Shattuck's decision to individualize the census, therefore, we must not only focus on the rise of wage labor but also turn our attention to the emerging culture of democracy and equality that was coming into its own during the Jacksonian era. Much like the wave of populist sentiments washing over the nation, Shattuck's decision to make the individual the basic unit of his moral statistics contained within it the rather radical notion that all men, be they paupers or millionaires, artisans or journeymen, patriarchs or laborers, were created equal. Shattuck's belief that statistics should first and foremost count people and not monied output was evident throughout the 1845 census. Take, for example, what Shattuck wrote in the section on public health after he had revealed the stunning fact that in one city ward the average house contained 37 people:

Others have objected to any investigation which might show one section of the city to be more unhealthy than the other, because it would *impair the value of real estate!* It has however appeared to us that if facts do exist, which show any section to be unhealthy, they should be made known, that the lives, the health and the happiness of our fellow beings may be preserved; and that the suffering, and the public and private burdens which their premature sickness and mortality occasion, may be averted. In proportion as we view human life, with all the manifold consequences of its perseveration, to be more valuable than the few dollars and cents, more or less, which a landlord may receive from a tenant in an unhealthy locality.... The private, social or public consequences of sickness and mortality cannot be measured in money. This is a matter of great magnitude, compared with it, all other investigations are unimportant.³⁰⁸

There were many other instances in his census where Shattuck did not shy away from statistics that likely made the economic elite in Massachusetts cringe due to their

³⁰⁸ Lemeul Shattuck, *Report to the Committee of the City Council Appointed to Obtain the Census of Boston for the Year 1845* (Boston, 1846) 137-8.

emphasis on individual equity and justice. By the 1840s, as we saw in the previous chapter, urban population growth statistics were crucial economic indicators for businessmen because they attracted capital from wealthy investors. This fact, however, did not stop Shattuck from openly criticizing the massive influx of immigrants flowing in to Boston as he argued that many of the immigrants being squeezed into the suffocating density of the eighth ward were purposely “deluded from their homes by wrong impression given them” regarding job prospects in Boston. Shattuck also went out of his way to prove that Boston's impressive results in the 1840 census – a precious figure for local real estate owners, railroad investors and urban boosters and one which they often flaunted in the national press - had in fact been too high since the marshals had counted all the sailors in town rather than just the ones who lived there. Finally, Shattuck scandalized the well-respected education system in Boston when he revealed, to the surprise of many, that a quarter of the children in Boston didn't go to school at all and that “the number of students in proportion to the population has decreased since 1825.”³⁰⁹

Shattuck's use of Boston's tax returns also demonstrates his typically Jacksonian era emphasis on inequality. In the same year as Shattuck's census, a Whig journalist published *Our First Men: A calendar of wealth, fashion and gentility* which listed those Bostonians who were “credibly reported to be worth one hundred thousand dollars.”³¹⁰ The pamphlet not only extolled the virtues of these men, but also portrayed such wealth statistics as the ultimate measure of Boston's rapid progress. Shattuck, on the other hand, used the same tax returns in a very different way. As we can see in the chart below,

³⁰⁹ Ibid, 11, 31.

³¹⁰ Richard Hildreth, *Our First Men: A Calendar of Wealth, Fashion and Gentility, containing a list of those persons taxed in the city of Boston credibly reported to be worth one hundred thousand dollars* (Boston, 1846).

Shattuck turned the city's tax returns into a table which quickly allowed the reader to see the uneven, pyramid-like, distribution of wealth in Boston. Not allowing for any misunderstandings, Shattuck then added a short analysis at the bottom of the table that illustrated how those men without property in Boston (who therefore paid only the poll tax) increased from 22 percent in 1820 to 48 percent in 1845.³¹¹

It is important to note that Shattuck did not focus on wealth statistics solely in order to point out the dramatic inequalities emerging in the Boston. His chapter "Progressive Wealth" also included a number of detailed charts on railroad dividends and savings banks. Shattuck believed capital accumulation was important, but he also believed that it was only a means to an end – not an end in itself. This is why only 15 of the 178 pages in his census were devoted to wealth. Like the other topics to which Shattuck devoted chapters, such as public health, water supply, religious institutions, pauperism, dwelling houses, public charities and education, he viewed capital accumulation statistics as yet another instrument which could be used to improve people's lives.³¹²

³¹¹ Shattuck, *Census of 1845*, 95.

³¹² *ibid*, 54

(ccc)

Classes of Bills.	1820.	1825.	1830.	1835.	1840.	1845.
Poll Tax alone,	1852	4523	5777	7546	8700	13105
Under 25 dollars,	4314	5201	5602	6267	6812	9196
\$25 to 100,	1212	1068	1453	1782	2329	2869
\$100 to 200,	281	243	390	435	555	839
\$200 to 300,	50	89	127	174	218	314
\$300 to 400,	16	33	56	90	107	162
\$400 to 500,	6	15	29	33	66	110
\$500 to 750,	4	16	32	50	61	137
\$750 to 1000,	1	7	19	24	34	43
\$1000 to 1500,	5	2	4	15	19	50
\$1500 to 2000,	3	4	5	4	13	11
\$2000 to 2500,	1	1	1	5	4	5
\$2500 to 3000,		1	2		3	3
\$3000 to 3500,			2	2		
\$3500 to 4000,				1		3
\$4000 to 4500,						
\$4500 to 5000,						
Over \$5000,					2	1
Total,	7,745	11,203	13,499	16,428	18,923	26,848

According to this statement those who paid a poll tax only

In 1820 were 1,852, or 22 per cent.

In 1830 " 5,777, or 42 "

In 1840 " 8,700, or 45 "

In 1845 " 13,105, or 48 "

Figure 11: Shattuck's Wealth Pyramid. A graph from Lemeul Shattuck's 1845 census of Boston which reveals the unequal, pyramid-like distribution of wealth in Massachusetts. Shattuck, *Census of 1845*, 95.

And yet, even though Lemeul Shattuck was clearly no businessman, and even though he was openly critical of a capitalist worldview, we must not ignore the cultural and intellectual impact that industrial capitalism and wage labor had on in his census. It is almost impossible to escape the milieu one is born into, and the economic elites in Shattuck's Boston were fast becoming dependent not on mercantile pursuits but urban,

wage-laboring manufacturing.³¹³ Just as local economic thinkers in this era were switching their allegiances from free trade to protectionism, Shattuck – who as a well-respected moral reformer had no interest in becoming a social outcast amongst Boston’s bourgeoisie – clearly allowed his statistical analyses to be influenced by the interests and values of a nascent manufacturing elite. As a result, the need for industrial discipline and new sources of authority for the ever-growing mass of city wage laborers played a crucial factor in the shaping of Shattuck’s moral statistics. In his tables on pauperism, for instance, Shattuck clearly saw the poor as potential sources of profitable employment and chose to classify them according to whether they could work or were “unable to labor.” He also went on to compare how much pauperism cost the city with how much was earned by the “House of Industry” where poor people were forced to internalize an industrial discipline through factory labor which paid for their sustenance.³¹⁴

When explaining the increase in crime in Boston, another popular moral statistic of the day, Shattuck revealed how the fast-expanding Massachusetts penal system was intertwined with the state’s rampant industrialization. Citing data from the directors of the Massachusetts “House of Reformation,” Shattuck legitimized the disciplinary powers of the nascent penal system and its relationship to wage labor. Of the 685 boys and 128 girls committed to the House of Reformation since 1826, Shattuck noted that 323 were sentenced for “theft or petty pilfering”, 216 for being “stubborn and disobedient,” 191 for “vagrancy” and 45 for being “idle and dissolute.” Thanks to the disciplining work of the House of Reformation, Shattuck proudly revealed that of these 800 plus criminals, 442 had

³¹³ On Boston elite’s shift from mercantile commerce to industrialization see Robert Dalzell, *Enterprising Elite: The Boston Associates and the World They Made* (Cambridge: Harvard University Press, 1987).

³¹⁴ *ibid*, 107, 125-6

successfully been “indented to farmers, seamanship and various trades” with “girls instructed in housekeeping.”³¹⁵ Prisons and other institutional asylums, Shattuck implied, were successfully turning those who challenged property rights or an industrial work ethic into disciplined, wage-laboring employees.³¹⁶

Bostonians’ response to Shattuck’s work reveals that the worldview inherent in his work was an accurate reflection of public opinion. Except for a few important exceptions, Shattuck’s census received positive reviews in the city press. “The fruits of Mr. Shattuck’s labors,” the *Boston Evening Traveller* noted, “realize the true idea of a census, namely such a minute survey of the people as shall develop and exhibit their actual condition as well as their numbers – their employments – their political, physical, moral and religious character – their advantages for moral and mental culture – their position for internal and foreign trade and commerce.”³¹⁷ Not everyone, however, was happy. For some, Shattuck’s individualistic inquiries were hard to swallow. In a letter to the *Boston Transcript*, one Boston resident attacked Shattuck’s personalized census, noting that it had included “impertinent inquiries” that not only “would get even Paul Pry to blush” but “could be of no kind of service, except to gratify the whim of some foolish old woman in the disguise of a man.” The *Transcript* editors heartily agreed with this reader, adding that answering Shattuck’s census questions would be “obeying the will of a tyro.”³¹⁸ Such criticisms, however, were rare. Of the 19,175 Bostonian households that were inquired, only 56 were

³¹⁵ *ibid*, 43

³¹⁶ Linking industrial discipline to temperance, Shattuck also felt the need to point out that in the Massachusetts “House of Correction” 2,011 of the 3,188 inmates were intemperate.

³¹⁷ Newspaper clippings, box 3, Shattuck Papers.

³¹⁸ *Ibid*.

unwilling to give information.³¹⁹ Apparently, the people of Boston were more than ready for a society based not on the patriarch but the individual. If anybody was having difficulties with this new social order it was the men. In a piece of information that received quite a lot of press in the city, Shattuck revealed that Boston's men had been far more likely to refuse to answer one of the marshal's questions than women.

Some of the city's leading businessmen, however, were not as pleased with Shattuck's work as most Bostonians. The *Boston Daily Whig* "was unable to find anything in [the census] sufficiently valuable to compensate for the expense of collecting and printing." The paper went on to mock Shattuck's rather antiquarian ways, adding that "those who are curious to know how many square inches of newspapers are printed in this city are referred to page 78." In many ways, the *Daily Whig* was right. For capitalists and financiers seeking information that would assist in their investment decisions, Shattuck's census was largely worthless. In a not-so-subtle criticism of the kind of investment-based statistics that were printed in periodicals like *Hunt's Merchants Magazine*, Shattuck himself made this point perfectly clear in his letter to a local Boston editor:

We collect facts on almost every subject, excepting our own lives, our health and what would be important to be known to make us better, healthier, and happier. As strange as it may seem, the statistics of human life, which should be regarded as more important than any other, are considered by some minds as less important than those relating to our cattle, or our hogs!"³²⁰

Here again, we see the main message of Shattuck's moral statistics. Human beings – not economic growth or market productivity – should be at the center of the American census.

³¹⁹ Shattuck, *Census of 1845*, 23

³²⁰ Newspaper clippings, box 3, Shattuck Papers

The South and Moral Statistics

Northerners were not the only ones in Jacksonian America transforming moral statistics into the dominant social indicators of their times. Moral statistics such as pauperism, mortality, insanity and crime also played a central role in southern culture as well. George Fitzhugh's incisive attack on capitalist societies demonstrates this fact. Reiterating the mantra of "pauper slavery" again and again, by the early 1850s Fitzhugh was pointing to "the nomadic beggars and pauper banditti of England" in nearly every speech or work. By the time *Cannibals All!* was published in 1857, Fitzhugh had added the leading statistical studies from Europe to his diatribe, noting that of the "1600 [pauper children in London] who were examined, 162 confessed that they had been in prison...116 had run away from homes.; 170 slept in the lodging houses, 253 had lived altogether by beggary; 216 had neither shoes nor stockings, 280 had no hat or cap or covering for the head, 101 had no linen, 349 had never slept in a bed; many had no recollection of ever having been in a bed, 68 were the children of convicts." Citing an English work titled "The Physical and Moral Condition of Children," Fitzhugh also attacked industrialization by demonstrating how the English boys who worked in mines were on average three inches shorter than the ones who worked on farms.³²¹

In a chapter of *Cannibals All!* titled "national wealth, individual wealth, luxury and economy," Fitzhugh directly addressed those who aggregate personal wealth statistics in order to measure the prosperity of a society. While "it is common theory with political economists that national wealth is but the sum of individual wealth," Fitzhugh wrote, "we

³²¹ George Fitzhugh, *Cannibals All!, or, Slaves without Masters* (Richmond, 1857) 189, 253-4.

think this theory false and pernicious“ because “it requires a thousand pauper laborers to sustain one millionaire, and without them his capital will produce no profit.” In a scathing critique of those who saw capitalist accumulation as the ultimate measure of social progress, Fitzhugh continued his attack, arguing that “half the boasted capital of England, probably two-thirds of it, is but a mortgage of the bones and sinews of the laborers, now and forever, to the capitalists. The national debt, stocks of all kinds, money at interest, and indeed all debts, represent this sort of private wealth, which is national poverty.”³²²

As we shall see in the following chapter, by the late 1850s Fitzhugh’s anti-capitalist statistical arguments were not very popular amongst southern leaders. But return to the 1840s, and it becomes clear that Fitzhugh was the final act in a long tradition of southern moral statistics. There is no better way to get at the cultural authority of moral statistics in the South than by returning to the scandal over the 1840 insanity statistics. Recall that it was the *Southern Literary Messenger*, a Virginian magazine for southern elites, which had first turned Jarvis’ discovery from an observation in a little read medical journal into a full-blown sectional conflict that made national news. The *Messenger* article, however, did not only focus on the stunning insanity statistics of the 1840 census but revealed that the editors of the magazine were up to speed on other moral statistics as well. Shifting away from insanity figures midway through the article, the magazine turned to crime statistics. “Of every nine convicts in the eastern penitentiary [in Philadelphia] in 1831,” the magazine noted, quoting the *Presbyterian Advocate* in Pittsburgh, “four were negroes; of every nine in 1841, seven are blacks!” Comparing these figures to Virginia Penitentiary, where there

³²² Ibid, 241

were “nearly three times as many whites as colored,” the article concluded that black slaves “are a more respectable class than persons of their race in the free states.”³²³

A reading of the *Southern Literary Messenger* in the 1830s and 1840s reveals that the magazine’s editors were not simply jumping on the moral statistic bandwagon when it suited their pro-slavery narratives. In another volume, the *Messenger* praised the figures included in the *American Almanac*, “especially the account of the principal benevolent institutions in the United States.” In an article on education the paper cited a Virginia legislature report which was very much disturbed by the fact that Virginia had 58,787 illiterates while Massachusetts only had 4,448, and that Massachusetts had 160,257 scholars attending primary schools while Virginia only 35,321. We should, therefore, not be surprised that Francis Lieber, Professor of History and Political Economy at South Carolina College, wrote a memorial to Congress in the 1830s suggesting that the moral statistics section of the census be dramatically expanded.³²⁴

As the scandal surrounding the 1840 census got uglier, Southerners exhibited their proficiency in moral statistics more and more. After Jarvis and the ASA wrote a memorial to Congress arguing that the 1840 census was filled with errors, William Weaver – superintendent of the census and a proud Virginian – provided Congress with a lengthy response. Besides questioning Jarvis’ calculations, Weaver also looked to legitimize his findings by supplying Congress with even more statistics comparing the North and South. Painstakingly gathering data on “the keepers of jails and houses of correction” as well as

³²³ “The 1840 Census,” *Southern Literary Messenger*.

³²⁴ “American Almanac,” *Southern Literary Messenger* 2 (1835):68; “Popular Knowledge the Necessity of Popular Government,” *Southern Literary Messenger*, 19 (1843): 298. Lieber’s memorial can be found in “The Approaching Census,” *United States Magazine and Democratic Review*, 5 (1839): 79.

the number of “inmates in the houses of industry or almshouse,” Weaver calculated that the percentage of “confined” blacks in Boston was 6 percent, in New York 4 percent and in Philadelphia 3.35 percent. Shifting to the South, Weaver then showed that the number of “confined” blacks in the Richmond was 2 percent and in Charleston 1.57 percent.³²⁵

Today, the very notion that a slave society that whipped, raped, commodified and imprisoned its subjects on forced labor camps called “plantations” would dare brag about the low number of convicts in their midst seems utterly obscene and ridiculous. We must, however, recall the cultural meaning of moral statistics in Jacksonian America. Above all else, these figures – and the asylums that generated them – emerged as a reaction to the deteriorating patriarchal order. When Southerners, therefore, boasted about how few black paupers, convicts and lunatics they had amongst them, they revealed that they shared some of the same social values regarding the disruption of the old Jeffersonian order as most Northerners. The construction of asylums in the South further proves this point. Virginia had built the first lunatic asylum in the United States in 1773, and in 1825 they began to build a second. South Carolina legislated for a state asylum in 1821, Georgia in 1837, Louisiana in 1847 and North Carolina in 1848 – the final of the thirteen original colonies to open a state asylum for the insane.

Southern interest in the very same moral statistics as northern elites begs one to ask: If the major social forces which led to the emergence of moral statistics in the North, such as industrializing, urbanization, immigration and wage labor, were not nearly as widespread in the southern states, why the shared interest in moral statistics? A closer look at the social changes at work in the Jacksonian South, especially in such states as

³²⁵ Errors in the Sixth Census,” 28th congress, 2nd session, 1845 House Document 116.

Virginia where moral statistics seem to have held the most sway, reveals that while the economic and social dynamics at work in the South were very different, the end result was fairly similar: social dislocation wrought by the deterioration of a patriarchal social order. In the North, it was urban industrialization and Jacksonian democracy which began to tear the patriarchal order apart. In the south, on the other hand, it was the internal slave trade.

The internal slave trade really ramped up following the War of 1812, as the native inhabitants of the Mississippi Valley had been either eradicated or removed and the land had become available for cotton planters and their slaves. Between 1790 and 1810, Virginia exported roughly 64,000 slaves. Between 1820 and 1840, they exported 200,000.³²⁶ The effect this uprooting of slave property had on southern life was enormous, as it tore asunder the patriarchal society of the South in ways not completely unlike what industrialized wage labor was doing in the north. Until the Jacksonian era, slavery was, in many ways, the kind of patriarchal and paternalist institution most convincingly depicted by Eugene Genovese. Once slaves had been initially purchased, they were not sold with particular frequency. Families were rarely split up and the relatively high rate of manumission before 1830 proves that enslavers were not looking to sell their slaves for profit. As a result, planters partly legitimized the horrific brutality of slavery by convincing themselves that they were paternalist patriarchs who looked out for their black “children” just as much as they looked out for their white ones.³²⁷

³²⁶ Michael Tadman, *Speculators and Slaves: Masters, Traders and Slaves in the Old South* (Madison, Wis.: University of Wisconsin Press, 1989) 12; On the paternalist, patriarchal and anti-capitalist nature of slavery as well as the decline of manumission rates see Eugene Genovese, *Roll, Jordan, Roll*; On how early American slavery was based on the patriarchal household see Wright, *Political Economy of the Cotton South*; Kulikoff, *Tobacco and Slaves*.

³²⁷ For the history of the internal slave trade see the following articles in *The Chattel Principle*, ed. Walter Johnson (New Haven: Yale University Press, 2004): Adam Rothman, “The Domestication of the Slave Trade in

The internal slave trade, however, destroyed not only hundreds of thousands of slave families but also the planter's own self-conception of who they were. Moral statistics, therefore, were one way in which southern elites' dealt with these social changes. Proving that the number of paupers, lunatics, prostitutes or criminals was still higher in the north allowed them to soothe their troubled conscience, while still giving them a sense that they had not lost control or authority over their society, despite the fact that their patriarchal household, and the source of their own social identity, had been shattered by market expansion.³²⁸

This, however, is not to say that moral statistics were being used in the same ways in the North and South. To get a better sense at the similarities and differences, we must turn to the southern equivalent of Lemuel Shattuck – Dr. Josiah Nott of Mobile, Alabama. Today, Nott is mostly remembered for his polygenesis racial theories which contended that blacks and whites were not of the same race. In the 1840s, however, Nott was a respected physician as well as the leading figure in the collection of southern morality statistics. He was in correspondence with Lemuel Shattuck and clearly was influenced by his work, especially his 1845 city census, as well as the writings of Europeans moral statisticians

the United States;" Steven Deyle, "The Domestic Slave Trade in America: The Lifeblood of the Southern Slave System."

³²⁸ For the effects that the internal slave trade on Southern Slave society see Walter Johnson, *Soul by Soul: Life Inside the Antebellum Slave Market* (Cambridge, Mass: Harvard University Press, 1999); *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom* (Cambridge: Belknap Press of Harvard University Press, 2013); Michael Tadman, *Speculators and Slaves* and "The Interregional Slave Trade in the History and Myth-Making of the U.S. South," as well as Lacy Ford, "Reconsidering the Internal Slave Trade: Paternalism, Markets and the Character of the Old South," *The Chattel Principle*.

such as Quetelet and Farr, whom he often cited. Despite the clear parallels, however, Shattuck and Nott's statistical visions were, in many ways, very different.³²⁹

In 1847, Nott wrote an article in *De Bow's Review* that openly attacked Shattuck's statistical work. Much like other southerners had done with insanity and crime statistics, Nott wanted to compare the mortality rates of northern blacks to those of southern slaves. In Philadelphia, he managed to collect some information, which he happily pointed to as showing that while 1 in 26 blacks died in Philadelphia each year, in Charleston it was 1 in 41. But Nott knew that the nationally renowned expert on vital statistics was Shattuck. If he were to prove that slaves led longer lives than free blacks, people would expect him to compare his figures with those of Boston. Much to Nott's disappointment, however, in Shattuck's reports "no allusion whatever is made to the mortality of the colored."³³⁰ In 1846, Nott wrote Shattuck requesting information on the mortality rates of blacks. While Shattuck's response has been lost, we know that Nott never received the information he requested.³³¹ That is because, much to Nott's disgust, Shattuck was not dividing whites and blacks into two separate and distinct statistical categories. Like many public figures in America, Nott complained, Shattuck was acting "as if the question were settled that the white man and the negro are essentially the same." As a man who would devote his life to the notion that God had not made blacks and whites the same species, Nott was horrified by Shattuck's statistical classification. He even suspected foul play. "Can it be that that the

³²⁹ On Nott's interest in moral statistics and mortality rates see Josiah Nott, "Life Insurance," *Debow's Review*, 3 (May 1847); For his biography see Reginald Horsman, *Josiah Nott of Mobile: Southerner, Physician and Racial Theorist* (Baton Rouge: Louisiana State University Press, 1987); For his correspondence with Shattuck on vital statistics see Nott to Shattuck, Oct 20th 1846, Lemeul Shattuck Papers.

³³⁰ Josiah Nott, "Statistics of Southern Slave Population," *Debow's Review*, v4 (1847) 275-276.

³³¹ Nott to Shattuck, Oct 20th 1846, Lemeul Shattuck Papers.

mortality of the colored population,” Nott asked, referring directly to Shattuck’s 1845 census, “is concealed on account of its connection with the question of abolition?”³³²

Nott also tried to use vital statistics to prove his polygenesis racial theories. If blacks and whites were not of the same race, he argued, than it is likely that mulattoes would be physically weaker and less fertile – not unlike mules. Citing the findings of an article from a Massachusetts medical journal, he noted that mulattoes between the ages of 40 and 55 were fifty times more likely to die than “pure” blacks or whites, thus proving that they are “the shortest lived of any class of the human race.” Unsurprisingly, it was Nott who successfully lobbied the 1850 census to create the racial category of mulatto for the first time.³³³

While Nott may not have liked Shattuck’s racial classifications, both men did share the same basic assumption: Mortality rates and longevity figures were the most important indicators of social progress. Arguing that in Africa, “the average longevity of blacks (as in all barbarous nations) will be less than among slaves,” Nott concluded that “history cannot point to any epoch, or spot on earth, where the condition of the negro race, either physical or moral, has been at all comparable with that of the slaves of the United States.”³³⁴ As a physician who ran a private infirmary in Mobile dedicated solely to the slaves of wealthy planters, it is not surprising that slave mortality rates were a source of pride for Nott.³³⁵ Yet as we shall see in the following chapter, by the late 1840s many planters were coming to

³³² Nott, “Statistics of Southern Slave Population.”

³³³ On Nott, the census and mulatto statistics see Anderson, *American Census*, 37-40; Jennifer Hochschild, “Racial Reorganization and the United States Census 1850-1930: Mulattoes, Half-Breeds, Mixed Parentage, Hindoos, and the Mexican Race,” *Studies in American Political Development*, 22(2008): 59-96.

³³⁴ Nott, “Statistics of Southern Slave Population.”

³³⁵ On Nott’s private practice see Hormsan, *Josiah Nott*.

treat their slaves more like capitalized investments than human beings, viewing their market *price* as their greatest source of pride. Nott, however, did not turn to price statistics to measure the wellbeing of slaves. Like Shattuck, he rejected the notion that money could replace people as the central unit through which progress would be measured. While slave-owners clearly had a direct pecuniary interest in the mortality rate of slaves, Nott's decision to focus on mortality statistics nevertheless reflects the patriarchal view of slavery in the early republic where the chattel principle had not yet become ascendant and paternalist planters took pride in the fact that they rarely broke up slave families and cared for their slaves till they died, even if they were no longer productive.

Nott's view of slave insurance proves this final point. One of the main reasons Nott was asked to write about vital statistics in the business-oriented *De Bow's Review* was due to the ascent of slave life insurance in the South in the 1840s. Yet while others were hailing slave insurance as a godsend, since it would give the south the investment flexibility it needed to industrialize (by making it less risky for large scale enterprises such as railroads or mining companies to make large capital investments in slaves,) Nott was adamantly against the insuring of slaves.³³⁶ The argument he gave was a moral one, and illustrates the tensions that lurked in the south regarding the destruction of the paternalist, patriarchal relations between master and slave:

As long as the negro is sound, and worth more than insured, self-interest will prompt the owner to preserve the life of the slave; but if the slave becomes unsound and there is little prospect of perfect recovery, the underwriters cannot expect fair play- the insurance money is worth more than the slave, and the latter is regarded rather in the light of a super-annuated horse.

³³⁶ On the rise of slave life insurance see Todd Savitt, "Slave Life Insurance in Virginia and North Carolina" *The Journal of Southern History*, vol 43:4 (Nov, 1977) 583-600; Sharon Murphy, *Investing in Life: Insurance in Antebellum America* (Baltimore: Johns Hopkins University, 2010);

Continuing, Nott – much like Shattuck – criticized the pricing of everyday life and the use of the dollar as the ultimate measure of society. “Would not many,” he wondered, “be like the Yankee Captain with the insured ship, ‘damn the old hulk, let her sink – I am safe,’? he asked, warning that “‘the Almighty Dollar’ would soon silence the soft, small voice of humanity.”³³⁷

Conclusions

A northern society in which the patriarchal relations between master and apprentice, husband and wife, or father and son were beginning to unravel was in dire need of new sources of order, discipline and authority. Moral statistics helped fill this power void, serving as instruments that could instill novel forms of societal control that did not emanate out of the hierarchical family order. Often times, such moral statistics ended up solidifying and legitimizing nascent capitalist relations amongst workers and bosses. With an influx of foreign immigrants and a new division of labor in the workplace, by the 1820s many laborers and masters no longer lived under the same roof or worked alongside each other on the same workshop floor.³³⁸ In the South, it was a booming internal slave trade led to the break up of the southern patriarchal household and with it the paternalist self-fashioning of slave-owners. Unlike in the North, however, Southern moral statistics served less as disciplinary tools – there was the constant threat of the whip and the trade block for that – but rather as ideological tools that could assuage the anxieties of southern slave-owners while legitimizing the horrors of the internal slave trade.

³³⁷ Nott, “Statistics of Southern Slave Population.”

³³⁸ Johnson, *Shopkeeper’s Millenium*.

Yet while moral statistics undoubtedly helped cement capitalist relations in both the North and the South, the data collected was *not* capitalist in nature. The men (and they were mostly men) who took on the painstaking task of generating and spreading moral statistics were rarely businessmen, but rather professional moral reformers, religious figures, government bureaucrats, general do-gooders, prison wardens or local physicians. Their goal was never profit maximization. They did not price people as if they were the inputs of a capitalized investment stream. In fact, they were adamantly against the capitalization of everyday life. Their rejection of such capitalist forms of counting stems from the fact that at the heart of these moral statistics was a vision in which the ultimate goal of society was not market growth or labor productivity but rather the physical and mental wellbeing of American *individuals*. All moral statistics, in fact, shared one general attribute: The basic unit of measurement was always individual human beings, never dollars and cents. These statistics measured prosperity by gauging the mental, physical and social condition of the American people, even those who were enslaved. Unlike Alexander Hamilton's market productivity figures or Freeman Hunt's urban growth statistics, the human subjects that moral statistics counted, tabulated and aggregated were not used as a means in which one could measure economic growth or potential profits. With moral statistics, individuals were not a means to an end, but the end in itself.

The focus on the individual, rather than the household or the "almighty dollar," reveals the close ties which existed between moral statistics and the emerging democracy for white men. Dramatic social changes such as the removal of property requirements to vote, the death of a culture of deference to elite political figures, and the ascent of boisterous party politics reflected the demise of a hierarchical America and the rise of

Toquevillian individualism and Jacksonian Democracy.³³⁹ In many ways, the same social forces shaped moral statistics, at least in the North. Here too the basic unit of statistical interest was no longer the household or the community but the individual. That the individuals counted and aggregated by moral statistics were not voters but often inmates of prisons or poorhouses does not diminish the democratic inclinations of moral statistics but rather illustrates the less romantic side of democratic revolution. For better or worse, undemocratic societies in which the patriarch is the ultimate source of authority have no need for either universal male suffrage or insane asylums.³⁴⁰

While they did not capitalize American society, moral statistics were undoubtedly a modernist project, the quantitative children of the Enlightenment. The moral reformers who joined reform societies, built asylums and collected statistics believed not in the depravity of mankind or the inevitability of God's will, but rather in the notion that people had the ability to alter the social reality they lived in, to improve the condition of people, and to make the world a better place. They placed people in asylums not only to discipline them but also because they viewed such spaces as "a grand theatre, for the trial of all new plans in hygiene and education, in physical and moral reform." There was a strong utopian slant to these institutions, a genuine millennial belief which sought not only to bring order and authority to a rapidly democratizing America but also a better life for everyday Americans.³⁴¹

³³⁹ For the rise of Jacksonian Democracy see Sellers, *Market Revolution*; Sean Wilentz, *The Rise of American Democracy: Jefferson to Lincoln* (New York: Norton, 2008); Arthur Schlesinger, *The Age of Jackson* (Boston, 1945).

³⁴⁰ Zakim, *Readymade Democracy*. Zakim offers a far more even-handed and less romanticized view of Jacksonian Democracy than most historians of the period such as Schlesinger or Wilentz.

³⁴¹ Qtd in Rothman, *Discovery of the Asylum*, 84.

So yes, these statistics were often wielded as elitist tools of power, bent on bringing order and discipline to a chaotic new world. And yes, they objectified people into statistical categories such as “insane” and “idiotic” that elites themselves had invented practically from whole cloth. And yes, Southerners cynically used these figures to legitimize their enslavement of the African-Americans. Yet, in some instances, the values that animated these moral statistics were not only elitism, cynicism and paternalism but also equality and democracy. Such a tension is evident when looking at the Americans who cited moral statistics in their day-to-day lives. While moral statistics were undoubtedly being used by manufacturing and capitalist elites to instill an industrial discipline in an emerging proletariat, radical reformers and journeyman workers cited them as well. Such Americans were attracted to these figures because their focus on the condition of the individual suited their democratic worldview. They also clung to these figures because moral statistics often revealed the darker sides of the dramatic social transformation underway in Jacksonian America, thus offering an ethical vision that did not view economic growth and rampant urbanization as an undeniable and inevitable social good. Finally, they used these figures to challenge a nascent brand of capitalizing statistics that turned men, women, slave and child into a string of priced inputs. For while moral statistics were many different things, used in many different ways, by many different people, precursors of modern, capitalizing economic growth statistics they must assuredly were not.

Chapter Five

Tale of Two Capitalisms: The Rise of Growth Statistics in Antebellum America

In the late 1850s, statistical indicators once again found themselves at the center of a bitter sectional dispute in Congress, a dispute that led to the longest speakership battle in American history. At the heart of the matter was a book, *The Impending Crisis of the South*, whose publication and dissemination had been supported and funded by Republican members of Congress. Written by a North Carolinian by the name of Hinton Helper, the vehemently anti-slavery tract had become the Republican Party's most effective piece of political propaganda, thanks in part to the lobbying power of Horace Greeley and some of the wealthiest and most powerful men in New York City who bankrolled the second edition of the book in 1859. By the fall of 1860, over 200,000 copies had been distributed making Helper's book one of the greatest best-sellers in American history. The direct association of Republican Congressmen in the funding of the book caused a tremendous controversy over who would be elected Speaker of the House as southern Congressmen refused to vote for any politician who had endorsed the controversial book.³⁴²

The debate over Helper's book has been well documented. Referring to it as a "rehearsal for the secession crisis," George Fredrickson has gone so far as to suggest that the *Impending Crisis* may very well be "the most important book, in terms of political impact, that has ever been published in the United States." Southerners certainly understood the power of Helper's creation, as they arrested any distributor of the book and

³⁴² On Helper's book see David Brown, *Southern Outcast: Hinton Rowan Helper and the Impending Crisis of the South* (Baton Rouge: Louisiana State University Press, 2006); George Fredrickson, *The Arrogance of Race: Historical Perspectives on Slavery, Racism and Social Inequality* (Middletown: Wesleyan University Press, 1988) 28-54; David Potter, *The Impending Crisis, 1848-1861* (New York: Harper & Row, 1976); On the inaccuracies of Helper's account see Robert Fogel and Stanley Engerman, *Time on the Cross: The Economics of American Slavery* (New York: W.W. Norton, 1974).

even hanged three men in Arkansas simply for possession of it. What has often been overlooked, however, was the fact that Helper's narrative was driven almost entirely by a never ending series of statistical tables he had molded out of the 1850 census data. Driven by a belief that Harriet Beecher Stow's moralizing *Uncle Tom's Cabin* would not resonate with rational men of business, Helper concluded his preface by noting that while "Yankee wives" had given "the fictions of slavery," it was time that "men should give the facts."³⁴³

Helper's book, however, was mostly filled with one very specific type of fact: Economic growth statistics which measured the American people's market productivity. Rather than focus on moral statistics as both northerners and southerners had done a decade prior, Helper's first chapter, which was over a hundred pages long, measured the "progress and prosperity" of the North and the South by tabulating the bulk amount and cash value of agricultural produce that both regions had extracted from the earth. In doing so, he discovered that in 1850 the North had produced \$351,709,703 of agricultural goods while the South only \$306,927,067. Throughout the rest of the book, Helper went on to concoct a dizzying array of similar market productivity statistics. To give a few examples (Helper was nothing if not repetitive), he demonstrated that the North had produced more bushels of wheat (72,157,486 vs 27,904,476), more cash from slaughtered animals (\$56,990,237 vs \$54,388,377), more money from manufacturing (\$842,586,058 vs \$165,413,027), and more bank capital (\$230,100,058 vs \$165,078,940).³⁴⁴

In his diatribe against slavery Helper heaped extravagant praise on northern capitalists, some of whom would later fund the book's second edition. In one passage, he

³⁴³Fredrickson, *Arrogance of Race*, 28; Hinton Rowan Helper, *The Impending Crisis in the South* (New York, 1857) v.

³⁴⁴Helper, *Impending Crisis*, 35, 39, 54, 64-6, 71, 283, 286.

pointed to Massachusetts's textile industrialist Abbott Lawrence who, according to Helper, was "always solicitous to invest his capital in a manner calculated to promote the interest of those around him." According to Helper, Lawrence was eager to build textile mills in Virginia but the inefficiencies of slavery made him think otherwise and he ended up keeping his money in New England where "he employed his capital in building up the cities in Lowell and Lawrence, either of which, in all those elements of material and social prosperity that makes up the greatness of states, is already far in advance of all the seedy and squalid niggervilles in Old Dominion."³⁴⁵

As Helper's book demonstrates, at some point in the 1850s, as Eric Foner, Stanley Elkins and Robert Fogel have all noted, northern discourse surrounding slavery changed.³⁴⁶ With this shift in discourse came a change in the statistics that anti-slavery proponents used. If the most frequently heard arguments against slavery in Jacksonian America had a moral basis (and thus often cited moral statistics to make their case,) by the late 1840s northern elites had shifted to economic arguments and thus cited economic growth statistics. As one skeptical Bostonian of the era remarked, the typical free soil speech consisted of "one-third disjointed facts, and misapplied figures, and great swelling words of vanity to prove that the South is, upon the whole, the very poorest, meanest, least

³⁴⁵ Helper, *Impending Crisis*, 108.

³⁴⁶ Eric Foner, *Free Soil, Free Labor, Free Men: The Ideology of the Republican Party Before the Civil War* (New York: Oxford University Press, 1970) 42; Robert Fogel, *Without Consent or Contract: The Rise and Fall of American Slavery* (New York: Norton, 1989); Stanley Elkins, *Slavery: A Problem in American Institutional and Intellectual Life* (Chicago: Chicago University Press, 1959). It seems that the first anti-slavery book in this genre was Daniel Reaves Goodloe, *Inquiry into the Causes which Have Retarded the Accumulation of Wealth and Increase of Population in the Southern States: In Which the Question of Slavery Is Considered in a Politico-Economic Point of View* (Washington DC, 1846). Often times these economic anti-slavery critiques were written by Southerners. Others include Henry Ruffner and Cassius Clay. See Kenneth Stamp, "Southern Refutation of the pro-slavery argument," *North Carolina Historical Review* 21 (Jan 1944) 35-45.

productive.” Ignoring the plight and suffering of the African America slave, the words that came to be used to define the South in Northern discourses over slavery were “unprofitable,” “sluggish” and “inefficiency.” In his speech to Boston and New York capitalists, for instance, businessman Nathaniel Banks referred to the South not as an enemy of freedom but rather the “foe of all industrial progress and of the highest material prosperity.”³⁴⁷

In the South, pro-slavery arguments were shifting from moral to market statistics in a remarkably similar way. Helper's book, in fact, can be seen as a detailed response to the statistic-laden literature that southerners such as Elwood Fisher and J.D.B. De Bow had been generating since the late 1840s. A decade before Helper would ignite the tempers of southern Congressmen with his productivity statistics the situation had been reversed, as Massachusetts Congressman Horace Mann had become enraged when he found Virginian Elwood Fisher's pro-slavery pamphlet "profusely scattered about the House."³⁴⁸ Clearly an antecedent of Helper's work, Fisher's short pamphlet used an array of productivity and economic growth figures – which he referred to as "landmarks of progress" - to argue that the South was far more advanced than the North. Arguing in his opening pages that "the first object of civilized life is to accumulate wealth," Fisher assumed that in order to undertake "a comparison of the progress of the white people of the respective sections" all one needed to do was compare their per capita wealth. Fisher then spent dozens of pages doing precisely that, as he compared the amount of property the average white man had in Maryland (\$531) versus Massachusetts (\$406), Virginia (\$758) versus New York (\$260),

³⁴⁷ Quotes from Foner, *Free Soil*, 43, 50, 62.

³⁴⁸ *Congressional Globe*, 30th cong, 2nd session, Feb 26, 1849, 318;

and Kentucky (\$456) versus Ohio (\$276). Of course what Fisher neglected to emphasize in these comparisons was that he quantified African American slaves as capital but not as people, a statistical choice that made the South's per capita wealth figures look especially impressive.³⁴⁹

By the late 1850s, Fisher's pamphlet was being reprinted in the pages of *De Bow's Review* and the South was awash with a novel "Cotton is King" literature that sought to legitimize slavery by proving how incredibly productive and profitable it was. These narratives were based predominantly on priced productivity statistics which were wielded in order to prove the value of slavery to American society. The amount of cotton exported from the south in the last 39 years, southerner David Christy noted, "has exceeded in value the exports of breadstuffs and provisions to the extent of *fourteen hundred and twenty-one million dollars!* Verily, Cotton is King!"³⁵⁰ Statistics collected from Louisiana's government reports, declared southerner Samuel Cartwright, "speak in a language too plain to be misunderstood by any one, and prove conclusively that....a dense slave population gives the highest value and greatest productiveness to every species of property."³⁵¹ "There is not a nation on earth," South Carolina Senator and wealthy plantation owner James Henry

³⁴⁹ Elwood Fisher "The North and South," *De Bow's Review*, 7:137; Fisher's pamphlet was published in numerous places. See for instance *Southern Quarterly Review*, July 1849, 273-311; *De Bow's Review*, Vol 7. (August, October, 1849) 134-45; 304-16; Again published in De Bow in 1857; *Southern Literary Messenger*. Vol 25, 81. Fisher was from Virginia and was a successful land speculator and had invested in the US Steamship Company. In a letter to Calhoun, Fisher claimed that he had sold 200,000 copies of his pamphlet. See Fisher to Calhoun, *Calhoun Papers*, Library of Congress, October 29th, 1849.

³⁵⁰ David Christy, "Cotton is King or Economic Relations of Slavery," in *Cotton is King and Pro-Slavery Arguments*, ed. EN Elliot (Augusta, 1860) 221.

³⁵¹ Samuel A. Cartwright, "The Education, Labor and Wealth of the South," in *Cotton is King*, 879

Hammond declared in his own famous “Cotton is King” speech, “that can compete with us in produce per capita. It amounts to \$16.66 per head.”³⁵²

As these examples indicate, antebellum Americans from the North and South continued to harness the power of numbers in order to prove that their society was developing, thriving, and progressing far more than their respective neighbors. As with Jacksonian moral statistics, moreover, we see how the aura of objectivity that numbers could generate continued to play a central role in American political discourse. But while upper and middle class Americans’ great respect for the impartiality of numbers remained constant in the 1850s, the statistics they most often used to measure the progress of their societies changed dramatically. As the statistics used in sectional debates demonstrate, a slow, uneven yet clearly discernible statistical revolution was taking place in antebellum America: As seen in the previous chapter, throughout the 1830s and 40s, in both the North and South, the “moral statistics” most frequently used to measure social progress explored issues such as insanity, education, literacy, disease, longevity, idiocy, imprisonment, prostitution and pauperism. By the late 1850s, however, productivity and wealth statistics which priced the market output of the American people took the place of moral statistics as the premier indicators of American progress and prosperity.

One cannot stress enough the significant ideological and cultural differences between these two forms of social quantification. Moral statistics served as potent instruments of government and elite power as they were used to discipline the public into accepting and internalizing a nascent, middle class set of norms and values regarding everything from sexuality to mental normalcy to work ethic. Nevertheless, at the core of

³⁵² James Henry Hammond, *Selections from the Letters and Speeches of the Hon. James H. Hammond of South Carolina* (New York, 1866) 315.

these statistics lay a social vision that placed *people* at the center of society. However sexist, oppressive, elitist or racist these figures were - and they often were – they measured the progress of a society by exploring the effect that certain cultural, social and economic developments had on people’s bodies, minds and souls.

On the other hand, Helper’s brand of market productivity statistics was based on a very different worldview. These figures re-imagined the American people – white or black, male or female - as functionaries of capital accumulation that could be plugged into growth-maximizing equations. Instead of seeking to measure the effect certain social developments or policies had on the physical, material or mental wellbeing of the American public, these figures examined the priced effect people’s income-generating labor had on economic growth and market productivity. Such a statistical approach tended to separate the economic from the moral, as the wonders of market growth and capital accumulation came to be reified as an objectively positive “thing” regardless of one’s personal opinions on ethics, politics, or society. Helper himself made this very clear in his preface. “It has been no part of my purpose to cast unmerited opprobrium upon slaveholders, or to display any special friendliness or sympathy for the blacks,” he wrote. “I have considered my subject more particularly with reference to its economic aspects as regards the whites—not with reference, except in a very slight degree, to its humanitarian or religious aspects.” Later on, he added that it was not his purpose “to draw a broad line of distinction between right and wrong, to point out the propriety of morality and its advantages over immorality.” For Helper, in short, slavery was bad not because it was immoral but because it was “unprofitable.” Slave labor should be replaced by wage labor, he argued, not because of natural rights or moral imperatives, or because of the physical and mental well-being of

African Americans, but rather because American society would get more bang for its buck.³⁵³

Fogel has accredited the northern shift in discourse with enormous political repercussions. According to him, “the shift took place in between 1854 and 1856 and its political success was immediate and spectacular. The new approach transformed the antislavery movement from a minor political factor into a political force that could control the national agenda.” Fogel was right, although it is important to note the class dynamic of this shift. Anti-slavery became a national movement in these years partly because the wealthiest and most powerful men in the north were finally convinced that, due to Helper-like economic arguments, slavery should not be allowed to endlessly expand.³⁵⁴

But why the shift from moral arguments to economic ones? From Calhoun and Jarvis’ moralizing insanity statistics to Hammond and Helper’s capitalizing figures? Why could economic figures “control the national agenda” in antebellum America but moral figures could not? And why did this statistical shift occur both in the North and the South? Until now, historians have often explained the northern shift in discourse (few have recognized the southern one) by noting its pragmatic nature. As Foner, Fogel and others have noted, northern Republicans believed that these arguments were more “effective.” While this seems to be undoubtedly true, a crucial question still remains: Why is it that, in the mid-1850s, American elites had come to believe that the American public would be more susceptible to economic growth figures than moralizing ones?

³⁵³Helper, *The Impending Crisis*, v.

³⁵⁴ Fogel, *Without Consent*, 326, fn 3; On the notion that economic arguments were more effective see Foner, *Free Soil*.

This chapter will try to answer these questions by first documenting how, by the late 1850s, in *both* the North and the South, moral statistics lost their dominant cultural grip on American elites quantitative imagination and were largely replaced by a very different set of social statistics. Capitalizing statistics. I will then explain why this happened by arguing that this cultural shift was due to two main economic developments: The capitalization of the white farmer, artisan, shopkeeper, wage laborer or petty commodity producer by westward-expanding railroads and the capitalization of the African American slave by the western-expanding cotton plantations. Rather than seeing a deepening ideological, cultural, economic and ethical chasm grow between North and South in these years, I will argue that an analysis of antebellum economic indicators suggest that the “impending crisis” which led to civil war may not have been a battle between a pre-modern, anti-capitalist South and a modern capitalist North but rather a battle between two conflicting forms of capitalism. While this chapter does not dare seek to explain the origins of the Civil War, it does suggest that the notion that the war, as Eric Foner has famously argued, was fought over “two irreconcilable ideologies” appears problematic since, as the statistical discourse at least indicates, the value systems of northern railroad investors and southern cotton planters were changing in fairly similar ways. In both instances, white male elites were turning to worship at the statistical altar of market productivity, capital accumulation and profit maximization.³⁵⁵

³⁵⁵ Foner, *Free Soil*, 12. The historiography on the origins of the Civil War is voluminous. Today, however, it appears that the most accepted narrative is still that of Eric Foner and David Brion Davis. Davis and Foner, like Genovese and most other leftist historians of the 1970s and 80s, thought that slavery was a pre-modern, anti-capitalist, almost feudal system of rule while free labor was modern, liberal and capitalist. They argue that the Civil War stemmed from the inherent differences in these almost diametrically opposed social systems. See Foner, *Free Soil*; David Brion Davis, *The Problem of Slavery in the Age of Revolution, 1770-1823* (Ithaca: Cornell University Press, 1975); Eugene Genovese, *The Political Economy of Slavery: Studies in the Economy and Society of the Slave South* (New York: Pantheon Books, 1965).

The Rise of the Business Press and the Fall of Moral Statistics

To understand the shift from moral statistics to economic growth figures we must first examine the institution which played a central role in the generation, articulation and dissemination of this new statistical vision – the business and financial press. We will begin by looking at the South and then turn to the North.

Crack open any history of slavery that has been written in the past century, and within a few pages you will undoubtedly come across a citation from *De Bow's Review*. The leading antebellum periodical for the business-minded southerner, it would not be an exaggeration to suggest that *De Bow's* was and remains the most important and oft-used source for economic and social historians of the antebellum South. And yet, while *De Bow's* has been combed by hundreds of historians, the man behind the magazine has often been overlooked.³⁵⁶ Mentioned usually in passing as a radical "Fire-Eater," who not only wanted to secede from the union but re-open the Atlantic slave trade and conquer the entire Southern Hemisphere, De Bow's ideological and economic views have not been examined closely. This may be because De Bow does not fit into the traditional narrative, perfected by Eugene Genovese, in which southern society is portrayed as neo-feudal, anti-modern and, most importantly, anti-capitalist.³⁵⁷

De Bow was a strong proponent of slavery, but he was also a strong proponent of railroads, industrialization, territorial expansion, immigration, banking, insurance and corporate finance. An overlooked advocate of capitalism living in perhaps the most overlooked capitalist city in American history (New Orleans), De Bow began his long and

³⁵⁶ For the lone biography (and one clearly written by a southerner) of De Bow see Ottis Clark Skipper, *JDB De Bow, Magazinist of the Old South* (Athens, GA: University of Georgia Press, 1958)

³⁵⁷ Genovese, *Political Economy; Roll, Jordan, Roll*.

influential career as a statistician, capitalist booster and business journalist by dreaming of becoming the South's Freeman Hunt. When he started his own magazine in the mid-1840s, the young De Bow wrote a letter to Hunt excitedly stating that he planned on publishing a southern version of *Hunt's Merchants Magazine*. De Bow would go on to do just that, and a comparison of *Hunt's* and *De Bow's* reveals a worldview that is far more similar than different, even if Hunt was a proud "Free Soiler" and De Bow was a proud "Fire-eater."³⁵⁸

In an early issue, De Bow restated Hunt's vision of a data-driven "science of business." Linking statistical analyses to capital gains, he declared that without statistical data "it is impossible than any previous calculations can be made, whether an adventure will turn account or not." "To the ignorant, commerce is but a game of chance," De Bow warned, "but to the accomplished merchant it is a science where skill can scarce fail of its reward."³⁵⁹ As with Hunt, De Bow saw his role as an educator who needed to teach planters in the south how to become profit-maximizing capitalists. As with Hunt, he felt that the most important step in this process was mastering the art of statistical analysis. "There is among the cotton planters no dissemination or concentration of professional knowledge and practice," De Bow complained, adding that "every farmer lives in an agricultural world of his own." "It is thought by many that at this time," De Bow continued, "that it would be

³⁵⁸ De Bow's letters to Hunt are lost but one can get a sense of what he wrote in Hunt's responses. See for instance Hunt to De Bow, July 23rd 1850. *De Bow Papers*, Duke University. On De Bow's interests in railroads see De Bow, "Mississippi and Atlantic Railroad," *De Bow's Review*, 1 (1846): 22-33; "Mobile and Ohio Railroad," *De Bow's*, 2 (1846): 328-339. On industrialization see *De Bow's*, 4:543, 5:532, 6:285.

³⁵⁹ De Bow, "A Professorship of Commerce," *De Bow's*, 6 (1848): 111.

greatly to the advantage of the planter if the amount of crop could be known. Well, most certainly the number of bales could be well as counted.”³⁶⁰

Enthralled by the role that statistics could play in the transformation of the South into a capitalist society, De Bow managed to convince a wealthy New Orleans merchant to endow a chair for him at the University of Louisiana as “Professor of Public Economy, Commerce and Statistics.” A year later, De Bow convinced the Louisiana state legislature to create the first state statistical bureau in the nation, and place him at its head. As he explained, the goal of the bureau was to use productivity figures to attract eastern capital to Louisiana by “contrasting each period of her Growth and comparing the results with those presented by other states of the Union.” In 1853, De Bow parlayed his statistical expertise into the most coveted position of all for the numerically minded: head of the census bureau. While De Bow arrived in Washington after the 1850 census had already been designed and executed, it was he who edited and summarized the census findings in the published compendium that would go on to be cited endlessly by northerners and southerners alike.³⁶¹

Much like *Hunt's*, *De Bow's* was filled with statistical data on anything and everything that might be of interest to a southern man of business, from cotton yields to slave prices to railroad statistics. Furthermore, as with *Hunt's*, *De Bow's* sought to transform population growth into a premier economic indicator of southern wealth

³⁶⁰ De Bow, "Cotton and the Cotton Planters," 2 (1846):1-20; Aggregating the amount of cotton and sugar that all the plantations grew together was of special importance to De Bow. See for instance "Domestic Statistics," 1:379-382, 1846; "Southern Agriculture" 4:442-445.

³⁶¹ For the endowed chair see De Bow, "Professorship of Public Economy, Commerce, Statistics in the University of Louisiana," *De Bow's*, 4 (1847): 414; Skipper, *De Bow*, 43-44; On the Louisiana Bureau of Statistics see Skipper, *De Bow*, 83 and *De Bow's Review*, 6 (1848):79, 8 (1849):32,422, 9 (1850):286; Census Compendium see De Bow, *Statistical View of the United States* (Washington DC, 1854);

accumulation. When *Hunt's* measured population growth, however, it mostly focused on the urban growth of landless wage laborers. De Bow, on the other hand, focused on the reproduction of slaves. In one article, for instance, De Bow wrote of the richest man in Virginia who was "the largest slaveholder in the world, unless the serfs of Russia be considered slaves." Gushing over Samuel Hairston of Pittsylvania (De Bow, like Hunt, often portrayed successful businessmen as cultural heroes), De Bow noted in awe how he managed three thousand slaves and how "they increase at the rate of near one thousand every year, and he has to purchase a large plantation every year to settle them on."³⁶² While southerners in the early republic, including Thomas Jefferson, viewed the population growth of slaves as both a blessing and a curse, De Bow always viewed the reproduction of slaves as a boon that had little downside.

De Bow's emphasis on continual growth and expansion can also be seen in his editorial choices. Often times, he would publish letters from far-flung boosters on the Texas frontier who were trying to convince slave-owners to push westward with their slave capital. Using population growth statistics as their main pitch, these letters actually sounded a lot like the *Hunt's* articles by western urban boosters such as Jessup Scott. "There are now about 3,000,000 slaves in the southern states increasing at the rate of nearly thirty percent every ten years" wrote one Texas booster to De Bow in a letter he later published. "Within that time," warned the booster, "a home and lands to cultivate must be found for another million of them." As Walter Johnson has argued, the ongoing reproduction of slaves forced southerners in this era to constantly push for spatial and territorial expansion westward, even if such lands first needed to be "freed" by military

³⁶² De Bow, "The Richest Man in Virginia," *De Bow's Review*, 14 (1853):70.

campaigns such as the Mexican-American War. De Bow was at the forefront of this expansionist worldview and in later years he would advocate for even greater growth by reopening the Atlantic Slave trade while eyeing the fertile soil of Central and South America.³⁶³

The Texan booster who wrote in to De Bow, however, also cited productivity figures and income yields, as he argued that \$151,885,440 worth of sugar, \$158,214,000 worth of cotton and \$113,914,080 worth of wheat could be earned in Texas. Such figures were a staple of De Bow's from the beginning as he amassed enormous amounts of data regarding land and slave productivity figures. In an ongoing segment of the journal titled "Agricultural statistics" Debow would give a monthly review of a choice plantation or region that read much like this example from 1847:

The plantation was commenced in 1821, with about three hundred acres; has been enlarged at various times to the capacity of 5,000 acres; situated in the fiat woods of Abbexville District, six miles from the Savannah river. The number of negroes on the plantation is 175; of these many are employed at indoor occupations, leaving 102 field workers, many of whom are small, having but recently left the nursery, and a number of them women, who occupy much of their time in attending to their children, so that the effective force of the plantation numbers 70 task hands. The number of mules 24. I found that this force had prepared and cultivated with great ease 750 acres of cotton, 325 of corn, 10 of peas, potatoes and squashes, 100 of wheat, and 300 of oats. The corn was particularly fine, and promised to yield from 25 to 30 bushels per acre: the wheat 10 bushels, and the oats 15 per acre, and the cotton 1000 lbs. per acre.³⁶⁴

De Bow's emphasis on slave productivity and population growth, however, changed over time. In the late 1840s, when the magazine was in its first years, De Bow published numerous articles citing moral statistics. These articles, many of which De Bow penned

³⁶³ "Public Lands of Texas," *De Bow's*, 13:53 (July, 1852); Johnson, *River of Dark Dreams*, chap. 1.

³⁶⁴ De Bow, "Agricultural Statistics," *De Bow's*, 6 (1848): 143.

himself, reveal a man who had read a great deal about moral figures, be it Lemeul Shattuck's or Horace Mann's reports in Boston, Josiah Nott's studies in the south or Edwin Chadwick's work in England. In an article titled "Physical and Moral Condition of the Blacks, North and South," for instance, De Bow did not treat slaves like capital as his growth and productivity statistics always did. Instead, he looked at their incarceration and mortality rates. While such articles never held a dominant position in his magazine, in the late 1840s they were often present.³⁶⁵

By the 1850s, however, De Bow had largely given up moral statistics and had turned solely to capitalizing figures. Narrowing his focus to three main issues – railroad investment, industrialization and plantation management and expansion, *De Bow's* became awash with productivity and profit-calculating figures. Unfortunately, while this makes for some terrible reading, the only way to get a true sense of how *De Bow's* read is to give another example at length. Here, in a typical passage, is De Bow capitalizing land and slaves in order to demonstrate to southern slave-owners what the South's aggregate return on capital might be if it chose to build its own textile mills rather than be dependent on the North:

The best cotton lands will not yield more than three hundred pounds per acre, and the general average from year to year probably does not exceed two hundred pounds. Suppose, however, the quantity to be two hundred and fifty pounds, there is required 1,794,807 acres of land to produce it; and as the product will not average more than 2,500 pounds per hand, it will require about 195.480 hands for its culture. The land, at \$25 per acre, is worth \$44,870,175. The hands (slaves) at \$500 each are worth \$97,740,000. Thus, the land and slaves together, would amount in value to \$ 142,610,000. The cost of other necessary appendages, such as cotton gins, presses, horses, mules, etc. will make up at least, with the above, the sum of \$150,000,000 as the capital employed in the production of the above amount of

³⁶⁵ De Bow, "Physical and Moral Condition of the Blacks," *De Bow's*, 4 (1847):290-291; See also De Bow's "Productive Energies and Spirit of Massachusetts" for his citing of Shattuck, Mann and others see *De Bow's*, 4 (1847):459-474.

cotton furnished to the British manufacturer. In order to make the estimate high enough for the planter, we will suppose his net receipts to be 6 cents per pound. At that price, the quantity, 480,000,000 pounds, will return him, say, in round numbers. \$29,000,000.³⁶⁶

Besides De Bow himself, no one illuminates the shift from moral statistics to economic growth figures that occurred in the pages of *De Bow's* better than Mobile physician Josiah Nott. As we saw in the previous chapter, Nott was the Lemeul Shattuck of the South, and can rightfully be remembered as the undisputed father of southern moral statistics. In the 1840s, he made a name for himself by publishing a number of articles which used moral statistics such as mortality and incarceration rates to prove the superiority of southern life. In February of 1851, however, he published an article in *De Bow's* that read very differently. Titled the "Future of the South," Nott used statistics in order to prove that the French abolition of slavery had been an unmitigated social disaster. Yet instead of citing moral statistics, Nott turned to productivity figures. "In 1836," he argued, "4,932 hands produced in Martinique 6,056,990 pounds of sugar or one hogshead each. In 1849, [following the French abolition of slavery in 1848] the proceeds averaged one hogshead for 34 hands." Hinting at what might happen if African-American slaves would be freed, Nott reminded his readers that "75 percent of the exports of the union are the product of slave labor" and that 1.23 million dollars capital created by northern textile factories had been "reared upon the frail foundation of black labor." While his previous moral figures had taken a paternalist approach towards the slaves' health and mortality rates, Nott now viewed slaves solely as functions of economic growth. "The thread of cotton

³⁶⁶ De Bow, *The Industrial Resources of the Southern and Western States* (New Orleans, 1852) 234. See also "Agriculture of the South and West," *De Bow's* 2 (1846):340-345; "Southern Agriculture" 4 (1847):442-445, 579-585; "Sea Island Cotton in Florida" 4 (1847):250-256.

has gradually enveloped the commercial world and bound the fortunes of American slaves so firmly to human progress," Nott concluded, "that civilization itself may almost be said to depend upon the continual servitude of the blacks in America."³⁶⁷

Nott's arguments did not go unnoticed. Five years later, a bestselling pamphlet titled "Cotton is King" repeated, in far more statistical detail, many of the arguments Nott's had made in his *De Bow* article. The pamphlet argued that the global reliance on slave productivity had transformed slavery into an "institution that was no longer controlled by moral or physical force but had become wholly subject to the laws of Political Economy." Rejecting the notion that freed blacks working for wages could possibly pick cotton as productively as slaves, as some antislavery northern capitalists at the time were arguing, the pamphlet concluded that "the products of slave labor are in such universal demand...that it is impracticable, in the existing condition of the world, to overthrow the system." Seeking to prove the immense and ever-growing productivity of slavery, the pamphlet contained a table, which revealed that while the slave-to-exported-cotton ratio in 1820 was 83 bales per slave, by 1853 it was a whopping 337.³⁶⁸

As a journalist, author, professor and statistical bureaucrat, De Bow's statistical writings had an enormous effect on southern ideology. From the evidence that remains in his personal papers, it appears that he had a fairly wide readership amongst southern planters, especially the more profit-oriented slave-owners who had left Virginia behind and had headed to the Deep South. For example, between the years 1849 and 1851, the state

³⁶⁷ Josiah Nott, "Future of the South," *De Bow's*, 10 (1851): 132.

³⁶⁸ David Christy, "Cotton is King or Economic Relations of Slavery," in *Cotton is King and Pro-Slavery Arguments*, ed. EN Elliot (Augusta, 1860) 21, 27, see productivity chart on 125.

that added the most subscriptions was Mississippi, followed by Alabama and Tennessee.³⁶⁹ From varying sources it is also clear that the leading politicians of the era, such as South Carolina Senator James Henry Hammond, Jefferson Davis and Edmund Ruffin, read *De Bow* religiously. Consumed by this elite class of slave-owners who had a firm grip on southern politics, *De Bow's* educated a generation of plantation owners to think of their slaves not as people but as capital and to think of progress not as moral, social or physical improvement but rather economic growth and capital accumulation.

Turning to the business press in the North in the 1850s, one can discern a similar rise of market productivity figures and a fall of moral statistics. *Hunt's Merchants Magazine* had numerous articles on moral statistics in the 1840s, and had even been one of the first papers to discover the controversial results of the 1840 African American insanity figures. By the 1850s, however, such figures had disappeared as *Hunt's* – as we saw in chapter three – turned mainly to market productivity and economic growth figures. Besides *Hunt's*, perhaps the best way to track the shift from moral statistics to growth figures in the North's newspapers is by following the careers of financial journalists Thomas Prentice Kettell and Henry Varnum Poor. While these two men's political inclinations differed greatly, an analysis of their writings reveals not only how their shared statistical vision was prevailing amongst the business elites of the north but also how it was spilling over into everyday newspaper news that non-businessmen read as well.³⁷⁰

While in the midst of utterly revolutionizing how Americans received their news, *New York Herald* editor James Bennett hired a former merchant by the name of Thomas

³⁶⁹ A partial ledger remains in the De Bow papers which allow us to get a sense of the increase in subscriptions but never the total number. See "Ledger 1" part 1, *De Bow Papers*, Duke University.

³⁷⁰ See chapter 3 for an analysis of *Hunt's Merchants Magazine's* economic statistics.

Prentice Kettell in 1835 to write the “money columns” in his paper. While Bennett has often been credited with inventing sensational journalism and the daily penny press, this too was a revolutionary move as Kettell became the first-ever financial editor of a daily American newspaper in the country. As one nineteenth century Wall Street investor later recalled, it was Kettell “who gave the [*Herald*] a reputation among financial men.”³⁷¹ Kettell would go on to contribute numerous articles to *De Bow’s* and *Hunt’s Merchants Magazine* while editing the much respected *United States Magazine and Democratic Review* in the 1840s and the *United States Economist* in the 1850s. In his writings Kettell became famous for using statistical data to make his arguments. Particularly fond of per capita wealth statistics, Kettell would often use such figures in a “before and after” comparison when looking to empirically prove the benefits that a bank, railroad or manufacturing company had on a city or town.³⁷²

In 1856, Kettell published a book that immediately sent shock waves through the country. Titled *Southern Wealth and Northern Profits* and promising in its subtitle to use “statistical facts and official figures” to show the “necessity of union to the future prosperity of and welfare of the republic,” the book was a plea for reconciliation between North and South so that the incredibly profitable institution of slavery would not be abolished. “What will the future historian say of the North,” Kettell asked rhetorically in his opening words,

³⁷¹ Quote from Nathan Smith, *Twenty Years Among the Bulls and the Bears of Wall Street* (New York, 1896) 523.

³⁷² Virtually nothing has been written on Kettell. An obituary can be found in the *Daily Alta California* and *San Francisco Times*, October 23rd 1878. On Bennett and the rise of the Penny Press see the still-relevant Walter Lippmann, “Two Revolutions in the American Press” in *Yale Review*, 20 (1931):433-441; Dan Schiller, *Objectivity and the News: The Public and the Rise of Commercial Journalism* (Philadelphia: University of Pennsylvania Press, 1981). For examples of Kettell’s statistical form of financial journalism see “Progressive Wealth and Commerce of Boston,” *Hunt’s Merchants Magazine*, 15 (1846):34; “The Commercial Growth and Greatness of New York,” *Hunt’s Merchants Magazine*, 5 (1841):30-44; “Influence of Railroads,” *De Bow’s Review*, 10,(1852); “Progress of American Commerce, Agriculture and Manufacture,” *De Bow’s*, 4 (1847):85-95.

“which destroyed its source of profit for a mere trivial pretense?” Rejecting the notion that the South was unproductive and backwards, and referring to the minor issue of human servitude as a “trivial pretense,” Kettell argued that “the condition of the South has changed to one of the most brilliant promise...the blacks themselves have been gradually elevated in material comforts and religious sentiment—not only far above those of any other country, but greatly and progressively above their own former condition.” Turning the market price of slaves into an economic indicator of social progress (not only for whites, but incredibly enough, for slaves as well), Kettell then used his patented array of “before and after” wealth statistics to prove how wonderful slavery truly was. “From a market value of \$250, [slaves] have risen to \$1500 and \$2000. This simple fact alone would show not only the great value that their labor is to the Christian world, but that their owners have thus, as it were, come under bonds in the sum of \$1200 and \$1800 each hand, to give them the best moral and material care.”³⁷³

A free-trade Democrat, Kettell’s tract was adamantly pro-slavery. Railroad journalist Henry Varnum Poor’s approach to the sectional crisis reveals that elite Northerners who supported the Republican Party were using very similar statistical measures. In 1860, with the threat of civil war looming, Poor was asked by the editor of the *New York Times* to write a series of articles on the impending crisis. Poor was not a political analyst or public intellectual but rather an editor of the *American Railroad Journal*, a financial magazine filled with statistics that were designed to help foreign and local investors decide in which railroad lines they should put their capital. The fact that he was asked to pen these articles reveals how American political discourse was shifting from political, social or moral

³⁷³ Thomas Prentice Kettell, *Southern Wealth & Northern Profits* (New York, 1860) 3-4,

disputes to financial ones. Poor, interestingly enough, had dabbled in moral statistics when he was a young man. In a visit to England, for instance, he had even asked to meet with Edwin Chadwick – the leading moral statistician in Great Britain – and then went on to spent a substantial amount of time collecting moral statistics to bring home to America. By 1860, however, after years of editing a railroad journal that stressed the maximization of capital returns, Poor’s statistical outlook was completely fixated on issues of productivity and profitability.³⁷⁴

In his articles for the *New York Times*, which had titles such as “A Businessman’s Look at the Political Crisis”, the adamantly anti-slavery Poor began his argument against secession by treating slaves like capital: “The South must continue to produce Cotton, not only as a means to existence, but because they cannot put their labor to any other use,” he noted. “According to their estimate, they have \$4,000,000 invested in labor, chiefly engaged in the culture of this staple. The interest, at 6 per cent, on this sum is \$240,000,000. If they were no other motive, they are not going to let this vast investment lie idle.” Poor went on to argue that due to the South’s dependence on the North’s far more advanced society of industry and finance, they could ill afford to secede. To prove the advantages of the North, Poor used the same market productivity statistics that Helper and others had already made well-known to the average reader of papers such as the *New York Times*. Citing *De Bow’s Review* (he and Poor were close friends), Poor echoed Helper’s earlier arguments by arguing that, for example, the aggregate market productivity of a citizen in South Carolina

³⁷⁴ On Poor see Alfred Chandler, *Henry Varnum Poor, Business Editor, Analyst and Reformer* (Cambridge: Harvard University Press, 1956) as well as Alfred Chandler Papers, Barker Library, Harvard Business School. For Poor’s interest in moral statistics see Chandler Papers, Box 11, folders 2-4. For Poor’s *New York Times* articles see Chandler Papers, Box 10, folder 5. Poor’s work was later reprinted as a book in London titled *Secession, its Effect upon the Commercial Relations Between the North and South* (London, 1861)

was \$41 a year (\$70 if only slaves are considered laborers) while a citizen of Massachusetts produced \$172 worth of goods annually. Clearly, Poor concluded, such figures proved that the North was the more advanced society and had little to fear from secession.³⁷⁵

De Bow, Kettell and Poor may have been financial journalists but by the late 1850s their writings were not being read solely by a small group of businessmen. Whether it was the *New York Herald*, the *New York Times*, or the *Census Compendium*, these voices of capital accumulation were fast-becoming mediators of everyday life and their hold on the middle-class American's social, political and economic imagination was getting stronger. As the educators and disseminators of capitalist quantification techniques, they played a significant role in the shift from moralizing to capitalizing indicators. Nevertheless, these men did not work alone. For their statistical visions to be disseminated, the data they endlessly cited first needed to be collected.

The American Geographical and Statistical Society and the 1850 census

In addition to sectional disputes and the business press, another illuminating way to witness the shift from moralizing to capitalizing statistics is by comparing the two statistical associations that advocated for these different figures. Founded in 1839, the engine behind the institutionalization of moral statistics was the American Statistical Association, an organization that was mostly made up of physicians, clergymen and moral reformers such as Lemeul Shattuck and Edward Jarvis. The institutional power behind the emergence of capitalizing statistics, on the other hand, came from a very different statistical association - the American Geographical and Statistical Society.

³⁷⁵ Poor, *Secession*, 16.

The American Geographical and Statistical Society was formed in New York City in October 1851 in the well-regarded library of John Disturnell. The books that lined the shelves of this impressive room offer the first clue as to the nature of the men who resided within it on that fall night. Originally trained as a map maker, by the early 1830s Disturnell had shifted to compiling information for enterprising businessmen, especially those interested in westward railroad investments. He wrote the first American railroad guide in 1840 and his series of Western railway guides were widely read in New York of the 1840s, as was his *New York As it Is* series and his statistical gazetteer. All these works were chock-full of business-oriented statistics in general and railroad figures in particular. If you opened the 1837 edition of *New York As It Is*, for instance, you might discover that the newly created New York and Harlem Railroad earned \$37,000 from 400,000 passengers in 1834 and \$52,000 from 460,000 passengers a year later.³⁷⁶

Disturnell's library, however, did not only include the books he had written but also the statistical sources he had used to compile these works. A look at his library book catalog reveals a cornucopia of statistical data: Agricultural statistics from Ireland to Wisconsin, emigration reports from New York to London, the seminal 1853 "Report on Colonial and Lake Trade" that was collected by a British consul in America, *De Bow's, Hunt's*, government banking records, Canal Commissioner reports, and, outweighing all other topics in sheer scope, railroad statistics. These included state railroad charters and "stockholders circulars" as well as reports on railroad costs and earnings not only in New

³⁷⁶ John K Wright, "The American Geographical Society, 1852-1952," *The Scientific Monthly*, 74.3 (March, 1952): 121-131; Paul J Fitzpatrick, "Statistical Societies in the United States in the Nineteenth Century," *The American Statistician*, 11 (1957): 13-21. See also "American Geographical Society" *Hunt's Merchants Magazine*, 25 (1851): 648-9. For a sampling of Disturnell's work see *A Gazetteer of the State of New York* (New York, 1840), *The Western Traveller: Embracing the Canal and Railroad Routes from Albany* (New York, 1844); *New York as It Is* (New York, 1837).

York State but also Alabama, Florida, “Mississippi to the Pacific,” and Honduras. The men who met that October night and in future society meetings fit right in with the books on Disturnell’s wall. They included Henry Varnum Poor, Freeman Hunt, Brooklyn businessman Henry E. Pierrepont, retired shipping magnate Henry Grinnell, future *New York Times* editor Henry Raymond, promoter of the Atlantic Cable Cyrus W. Field, Edward Mansfield, a Cincinnati editor, urban booster and well-regarded statistical wizard, and lastly Archibald Russell, the least known man in the room but one of the most important.³⁷⁷

Just as Edward Jarvis and Lemeul Shattuck were the heart and soul of the ASA, the leading figure behind the AGSS was undoubtedly Archibald Russell. Russell had first made a name for himself in 1839 when he had published a book which described in great detail the types of statistics the decennial census should collect in the upcoming 1840 census. Russell’s work apparently was well received as he was asked a decade later, along with Lemuel Shattuck, to compose the census tables and questions for the 1850 census. In the decision to turn to both Shattuck and Russell we see how the 1850s was a moment in which America was at a statistical crossroads with elites and politicians believing that both Shattuck’s moral statistics and Russell’s capitalizing ones should be institutionalized by the American government.³⁷⁸

³⁷⁷ E.C. Strazinsky, “Catalogue of the Library of the American Geographical and Statistical Society” (New York, 1857); For a longer list of members see Fitzpatrick, “Statistical Societies.”

³⁷⁸ Very little is known of Archibald Russell and the only papers he left behind can be found in the Lemeul Shattuck Papers, Mass Historical Society. While these letters reveal that Russell had co-written the 1850 census questions with Shattuck they do not spread much light on how they divided the work. Still, the clear conceptual resemblances between Russell’s 1839 book and certain sections of the 1850 census suggest make evident that Russell designed the agricultural and manufacturing statistics while Shattuck designed the population, moral and vital statistics. See Russell to Shattuck, January 2nd and March 20th 1851, box 2, Shattuck Papers. Archibald Russell, *Principles of Statistical Inquiry: As Illustrated in Proposals for Uniting and Examination into the Resources of the United States with the Census to be Taken in 1840* (New York, 1839).

Shattuck and Russell's statistical vision could not have been more different. Even a superficial comparison of how they chose to frame their projects effectively illustrates some of the key differences between their quantitative worldviews. Russell's book's subtitle explained how his work included "proposals for uniting and examination into the resources of the United States with the Census." Shattuck's subtitle, on the other hand, noted how the purpose of his work was to create a census "illustrating the history and condition of the population, and their means of progress and prosperity." While Russell viewed the census as a tool that should aggregate and standardize the "resources" of the United States, which as we shall see included the American people as well, Shattuck saw the census as a tool that should focus its energies on measuring the condition of Americans not as resources, but as citizens.

In the opening pages of his 1839 work, Russell made his main statistical goal very clear, noting that he was "anxious to procure the opinion of businessmen upon the form most suitable for returns from the various manufacturing and agricultural interests."³⁷⁹ He then went on to carefully explain precisely how such data would be collected. In turning first to manufacturing, Russell quickly ran into the same problem that Alexander Hamilton, Tench Coxe and Albert Gallatin had experienced a few decades prior: American artisans and yeoman households did not view their workshops as for-profit enterprises or capital investments but rather as extensions of their proprietary livelihood. Russell, however, came up with a useful narrative to solve this problem:

If a village shoemaker is called a manufacturer, what sort of return can he make [?] he knows not how many boots he has made, nor the value of those he has repaired, but working for minute gains he does not keep accurate accounts of the progress of his business. On the whole therefore we believe that the term manufacture ought

³⁷⁹ Russell, *Principles of Statistical Inquiry*, iv.

strictly to be applied to articles intended for *wholesale or export trade*, and that those avocations which merely supply the locality where they are made are more properly the product of trades than manufactures.³⁸⁰

As the above quote illustrates, and as Michael Zakim has noted, Russell worked out these contradictions by simply defining his statistical categories according to his own personal ideological worldview: If manufacturers do not maximize profits, they are not manufacturers. The criteria for manufacturing had changed dramatically. Instead of manufacturing being defined by what it produced, it was coming to be defined by the profits it earned.³⁸¹

While in this instance Russell chose simply to ignore that which he could not price, his work was often quite exacting. For example, unlike Coxe or Blodget before him, Russell was wary of the perpetual danger of “double counting,” a fear that the inventors of GDP a century later would place at the center of their statistical project. “If we include this wool in any estimate of the agricultural produce of the country,” he warned, “we must exclude it from its manufactured produce, for if we do not it will be reckoned twice over.” While completely discounting and erasing “local” or small-scale manufacturing and farming, such a focus on the minutiae of the census figures gave Russell’s statistical vision an impression of objectivity, precision and rigor that previous economic statisticians had lacked.³⁸²

Finally, in detailing what manufacturing data should be collected, Russell suggested that the 1840 census also include “rate of wages” as well as “the aggregate time of work in a year.” While most of the other categories he included in the manufacturing census, such as

³⁸⁰ Ibid, 51.

³⁸¹ Michael Zakim, “Inventing Industrial Statistics,” in *Money Matters: The Law, Politics, and Economics of Currency*, a special issue of *Theoretical Inquiries in Law*, vol. 11, no. 1 (2009).

³⁸² Russell, *Principles*, 64-65,

“capital invested” and “total market value,” had already appeared in the 1820 census, these last two suggestions were a novelty. In asking for wage rates, Russell was coming to recognize the importance of creating a wage labor database for businessmen since such figures could enable one to “contrast the different manufactures in this country with those in foreign parts.”³⁸³ Such wage statistics would allow businessmen to not only see what the “competition” in other towns, states or countries was paying for labor but also discover how different wage rates affected the bottom line of a firm. In requesting that the census add the category of “aggregate time of work in a year,” Russell was looking to create far more accurate productivity statistics of the American worker than any of his predecessors had thought necessary. Only if one knew how long a laborer actually labored could one then calculate the amount of cash revenue they generated in a specific timespan. In the 1840s, the basic unit used for measuring labor time was still days, so Russell was interested in “the whole number of days’ work performed.” Nevertheless, Russell’s request can be seen as the first step towards scientific management, or “Taylorism”. As Frederick Winslow Taylor would later argue, the most important information needed to ramp up labor efficiency was precise labor productivity rates.³⁸⁴

This was not the only section of Russell’s book that sought to generate new forms of labor productivity statistics. Unlike the 1810 and 1820 censuses, Russell believed that the government should not only collect manufacturing data but agricultural data as well. In his detailed proposal on agricultural statistics, Russell noted that there was at present a

³⁸³ Ibid, 65.

³⁸⁴ On Taylorism see Frederick Winslow Taylor, *The Principles of Scientific Management* (New York: Harper, 1911); Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century* (New York, Monthly Review Press, 1975).

“momentous question, in the course of being solved, to which we invite the attention of the statist; and that is, whether Cotton can every productively become the produce of free labour?” To answer this question, Russell shifted his glance to Hall and Jones counties in Georgia. Russell chose these two counties because while they had roughly the same number of inhabitants, Hall County had nearly six times as many slaves as Jones County. “Now if we could know the exact production of each district, as, for instance, that Hall County raised 10,000 lbs. of Cotton, and that Jones County raised 12,000,” Russell noted, “we would be able to see the influence which free white labor had in the agriculture of Cotton.” To measure the merits of slave and free labor, Russell had concluded, the census needed to generate more accurate cotton productivity statistics. To do so, Russell’s proposed agricultural statistics also included categories that measured the “average return per acre” of such staple crops as wheat, cotton, rice or barley. “One of the most interesting features of such returns,” he concluded, “would be to show the exact progress of improvement...and to exhibit the increasing wealth of the country at large.”³⁸⁵

Working with Shattuck on the 1850 census tables a decade later, the statistical vision that Russell articulated in 1839 was institutionalized by the federal government. Unlike the 1840 census, which had only instructed the census marshals to collect the products of farming and manufacturing on a vaguely unclear “district-wide level,” the 1850 census was the work of someone who had put a great deal of thought into how accurate productivity figures could actually be collected. For the first time ever, the census marshals were given a very precise set of instructions regarding how their tables should be filled. Moreover, the agricultural and manufacturing questions were to be answered not on a

³⁸⁵ Russell, *Principles*, 115-117.

general “district level” but rather by visiting each farm or factory in the region. To do so, the marshal was instructed to “use his discretion in assisting a farmer to estimate fairly and accurately the amount of his crops when he keeps no exact account.” The census also instructed the marshals to ignore any farm “where the productions are not \$100 in value” and any factory than made less than \$500 worth of goods. As we saw in his book, Russell had decided to statistically ignore the labor of the less market-oriented farmers and artisans.³⁸⁶

Just like his 1839 book, the 1850 census placed a clear emphasis on generating accurate productivity and economic wealth statistics. While the 1840 census only asked for bushels of oats or pounds of wheat, the 1850 census added the number of acres of land each farm had and whether they were improved or not. This would allow for the very “average return per acre” statistics that Russell had envisioned in his book a decade prior. The 1850 census was also the first census to ask farmers to price the overall “cash value of the farm,” as well as the “value of homemade manufacturers.” Finally, in fearing double counting the marshal’s instructions were clearly influenced, and likely even written, by Russell as they requested that if raw materials were purchased for the purpose of manufacture, they be removed from the aggregate value of a farm.³⁸⁷

The main result of Russell’s statistical endeavor was the pricing of the productive capabilities of both man and nature. Without this data, none of the numerous economic arguments that wielded productivity statistics as the ultimate measure of progress in the 1850s would have existed. No one makes this point better than Hinton Helper. “In the

³⁸⁶ The Instructions to the 1850 Census can be found in Carroll D. Wright, *The History and Growth of the US Census* (Washington DC, 1900) 235.

³⁸⁷ The schedules of the 1850 census are in Wright, *US Census*, 234.

process of my conversion from the pro-slavery opinions and prejudgments in which, if I may so speak, I was born and bred," Helper recalled in a book he wrote in 1871, "nothing influenced me so much, nothing so whetted my desire for closer scrutiny into the two conflicting systems of society, nothing so hastened my espousal of the cause of white free labor, and certainly nothing so strengthened and confirmed me in my utter detestation of negro slavery, as the thorough perusal of a certain public document. . . the Seventh Census."³⁸⁸

While the business press, the American Geographical Statistical Society and the 1850 census played a crucial role in the rise of growth figures and the decline of moral statistics, what remains unclear is the timing of this shift. Why did growth figures and market productivity statistics begin to capture the American economic elite's imagination, in the North and South, when they did? To answer this question we must turn to the dramatic westward expansion of railroads and cotton slave plantations that took place in the mid-1830s and onwards. Both the railroad revolution and the cotton boom were closely linked to the flow of capital westward, be it in the shape of iron rails or human bodies. Only by exploring the effect that the cotton boom and internal slave trade had on the quantitative imagination in the south, and the effect that the railroad revolution similarly had in the north, can we understand why American elites in both regions came to measure social progress and success by pricing the market productivity of the American people, be they black or white, slave or free.

³⁸⁸ Hinton Helper, *Noonday Exigencies in America* ((New York: Bible Brothers, 1871) 162.

Cotton Boom, Internal Slave Trade and the Capitalization of Slavery

Since the time of the first Virginia tobacco plantations in the seventeenth century, slavery had been a commercial enterprise. Following the cotton boom and the western expansion of slavery in the early nineteenth century, however, slaves and land were coming to be viewed by their southern owners not only as pieces of property but also as pieces of *capital*. The South was transforming – not entirely unlike the north - from a patriarchal commercial society into a capitalist one.³⁸⁹ The evidence for the capitalization of slavery is overbearing. Frederick Douglass recognized one aspect of this process as early as 1846. “I will give you an invariable rule,” he noted. “When cotton gets up in the market in England, the price of human flesh gets up in the United States.”³⁹⁰ Economic historians have corroborated Douglass’ comment.³⁹¹ Following the invention of the cotton gin, the expropriation of western land from natives and the emergence of a booming internal slave trade in the 1830s, the prices of slaves began to move in tandem with the prices of cotton.

³⁸⁹ Since most historians of slavery tend to focus on the antebellum period there have been few books which have looked at how slavery changed over time and how cotton slavery differed from colonial forms of slavery. The tendency in most of the historiography has been to begin their narrative with the cotton gin. This includes Genovese, *Political Economy and Roll, Jordan, Roll*; Walter Johnson, *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom* (Cambridge: Belknap Press of Harvard University, 2013); Robert Fogel and Stan Engerman, *Time on the Cross: The Economics of American Negro Slavery* (Boston: Little, Brown, 1974); Fogel, *Without Consent or Contract*; Kenneth Stampp, *The Peculiar Institution: Slavery in the Ante-Bellum South*. The few books which have traced change over time are not directly interested in questions of capitalism. See for instance Ira Berlin, *Many Thousands Gone: The First Two Centuries of Slavery in North America* (Cambridge: Harvard University Press, 1998). One work that does try and look at the shift from a patriarchal to a capitalist system of slavery is Gavin Wright, *The Political Economy of the Cotton South*. An important exception to this rule can be found amongst the writings of a group of scholars who have focused on the idea of a “second slavery.” For an article encouraging American historians to begin to theorize the changes to slavery brought on by the cotton boom see Anthony Kaye, *The Second Slavery: Modernity in the Nineteenth Century South and the Atlantic World*, *Journal of Southern History*, 75 (2009): 627-650. See also Dale Tomich and Michael Zeuske, eds., “The Second Slavery: Mass Slavery, World-Economy, and Comparative Microhistories,” *Review: A Journal of The Fernand Braudel Center*, 31 (2008).

³⁹⁰ Frederick Douglass, “American Slavery, American Religion, and the Free Church of Scotland: An Address Delivered in London, England, on May 22, 1846” in *American Slavery: Report of a Public Meeting* (London, 1846).

³⁹¹ Fogel and Engerman, *Time on the Cross*, 60-78

This is because slave owners were coming to imagine their slaves as income generating units of capital. Like the price of any person, place or thing imagined as a capital good - be it a textile machine, an urban lot or an acre of land - the market value of slaves was beginning to be determined mostly by the future revenue streams that slaves would yield to their masters. In the antebellum South, such a revenue stream was determined by the price of cotton.³⁹²

Further evidence of the constant valuing of slaves according to their income-earning capacity can be seen in the overlap between a slave's price and their age. The average price of an antebellum slave peaked roughly at the age of 30 and then began to decline. Clearly, slave-owners were shrewdly pricing their slaves according to the present and future annual revenue streams they produced. Slave-owners were also taking into account their slaves ability to reproduce. Even though slave-owners believed men could pick far more cotton than women, the average price of a ten-year old boy and girl were the same: 400 dollars. Such a convergence can only be explained by the fact that slave-owners were not only capitalizing future bales of cotton but future generations of enslaved children as well.

393

The valuation of slaves according to their market productivity can also be seen by the ways in which slaves were priced according to their physical capacities and supposed character traits. At a slave auction in Richmond, Virginia in 1853, for instance, an enslaved boy who was 5 feet tall was worth 850 to 950 dollars while a boy who was only 4 foot 8

³⁹² Fogel, *Without Consent or Contract*: "there was very little difference between the way in which planters priced their slaves and the way they priced their other capital assets."

³⁹³ Fogel and Engerman, *Time on the Cross*, fv; On the question of slave breeding see Stampp, *The Peculiar Institution*; Amy Dru Stanley, "Slave Breeding and Free Love", *Capitalism Takes Command: The Social Transformation of Nineteenth Century America*, ed. Michael Zakim and Gary Kornblith (Chicago: Chicago University Press, 2012)

inches was worth only 700 to 800 dollars. Apparently, each inch of the young slave's body, in the slave-owners eye, was a sign of increased market productivity.³⁹⁴ Plantation inventories of the antebellum era further illustrate how slaveholders were coming to imagine the slave first and foremost as a unit of income producing cash. James Coles Bruce was one of the largest slave-owners in the South. His slave inventory listed the age of the slave, measured their productivity in units of "hands", their market value and finally, their temperament and their health. Claiborn West, a 28-year old "full-hand," was listed as a "good negro" and was worth 800 dollars. Bob Scooner was also a 28-year old "full-hand" but was only worth 700 dollars because he was "well disposed but sloe." Bruce, apparently, had calculated that Scooner's lower productivity was worth roughly 100 dollars. Finally, John Miller was also a 28-year old "full-hand," and there is nothing to suggest that he was not a productive worker. But Miller was listed at only 600 dollars because he had runaway in the past. The 200 dollars Bruce knocked off his market value was apparently the capitalized risk premium of him doing so again.³⁹⁵

From a capitalist's point of view, slaves were a dream investment in the 1850s. Their earnings were stable, the markets for them liquid, their value was constantly on the rise and unlike machines or land, they could both reproduce themselves and be spatially moved from place to place. Southerners understood all of this. One does not, therefore, need to look only at cotton or slave price patterns to prove that slaves were being capitalized. We can also listen to the slave-owners themselves. "The peculiar institution,"

³⁹⁴ William Chambers, *Things as They are in America* (Philadelphia, 1854).

³⁹⁵ "List and Inventory of the Negroes on the Plantation of Messrs Bruce, Seddon & Wilkins" Nov 22nd, 1849 in Papers of the James Coles Bruce Family, Alderman Library, University of Virginia. See Fogel, *Without Consent or Contract*; Fogel and Engerman, *Time on the Cross* and Walter Johnson, *Soul by Soul*, for more examples of this.

one southern commentator noted in *De Bow's*, "had become the most profitable and safe investment in the whole country."³⁹⁶ James Henry Hammond reveled in the fact that slaves not only earned profits for their owners in the field but in the marketplace, noting how "the very negro who, as a prime laborer, brought 400 dollars in 1828 would now, with thirty years upon him, sell for 800."³⁹⁷

A strong connection between the price of a slave and their market productivity could, however, only come about if slaveholders more-or-less knew, in every given year, the market productivity of their slaves. As slave narratives and other sources show, enslavers clearly had such data at their fingertips thanks to the daily routine known as the weighing of the cotton. "When a new hand, one unaccustomed to the business, is sent for the first time into the field," escaped slave Solomon Northup explained, "he is whipped up smartly, and made for that day to pick as fast as he can possibly. At night it is weighed, so that his capabilities in cotton picking are known."³⁹⁸ Historians have shown that this was a widespread practice. A crucial method not only of discipline but also of capitalization, the daily meeting of slave and overseer included not only a whip but also a slate that carefully documented the number of bales that each slave picked. Finally, it is important to note that even those slave-owners who did not weigh their own slaves' cotton could still estimate their productivity rates thanks to planter journals such as *De Bow's*.³⁹⁹

³⁹⁶ *Debow's Review* Qtd in Bancroft, *Slave Trading in the Old South*, 342.

³⁹⁷ Hammond, *Letters and Speeches*, 345.

³⁹⁸ Solomon Northup, *Twelve Years a Slave* (New York, 1853), 165.

³⁹⁹ For another example of weighing see John Wesley Monette "The Cotton Crop" in *The Southwest by a Yankee* (1846); See also Walter Johnson, *River of Dark Dreams*; Caitlin Rosenthal, "From Slavery to Scientific Management," (Phd. Diss., Harvard University, 2012).

The capitalization of slaves, however, did not emerge solely out of the goings-on on the slave plantation but rather had much to do with the booming markets for slaves that were developing in every major southern town in antebellum America. One of the main reasons the widespread capitalization of slaves did not take place on colonial tobacco farms was due to the crucial fact that most slaves in colonial America were rarely re-sold through a liquid slave market. The early American tobacco plantation was still based on the paternal and proprietary tenets of the patriarchal household. As a result, slave-owners were very hesitant to sell their slaves and most sales occurred only after death or bankruptcy. Furthermore, since slaves, much like land, were viewed as property but not capital in early America, slave-owners rarely kept track of their slaves' fluctuating market values. In the direct tax law of 1798, for instance, it was noted that "all slaves, whether negroes, mullatoes or mestizos above the age of 12 and under the age of 50...shall be assessed at fifty cents."⁴⁰⁰ When calculating the wealth of a plantation in 1798, and again in 1815, there was *no difference* in the price of a 49-year old or an 11-year old. This is partly because the fairly rare occurrence of slave selling created a minimal internal slave market that was not very liquid or widespread. Furthermore, due to the patriarchal-commercial nature of slavery in colonial and early America, few slave-owners sought to value their slave by extrapolating how much tobacco or rice they would annually pick for the next twenty or thirty years.⁴⁰¹

⁴⁰⁰ "An act to Lay and Collect a Direct Tax within the United States," July, 14 1798, *The Public Statutes at Large of the United States of America*, ed. Richard Peters (Boston, 1845) xxxvi.

⁴⁰¹ For taxation and slavery see Robin Einhorn, *American Taxation, American Slavery* (Chicago: University of Chicago Press, 2006).

Besides the capitalist discipline and pricing practices taking place on the plantation, the second central development which led to the capitalization of slaves was, therefore, the explosion of the internal slave trade and the social ascendance of the chattel principal in antebellum America. While the chattel principal, of course, existed in colonial and early America, other social principals such as patriarchy, paternalism and proprietary held more sway. By the 1830s, however, this was no longer true. Historians agree that the 1820s and 30s were the crucial decades for the internal slave trade and the ascendance of the chattel principal as perhaps the most dominant force in the antebellum South. Between 1790 and 1810, roughly 115,000 slaves had been either bought or sold via the internal slave trade. Between 1820 and 1840, that number exploded to 415,000.⁴⁰² As the set templates of slave accounting books in the antebellum era reveal, this booming trade caused owners to begin to annually update the price of their slaves as they constantly had one eye on the market. If you were to ask a slave-owner in 1750 Virginia how much one of his slaves was worth, you'd likely get a very generic price that had not changed in years. In 1850 Alabama, on the other hand, you'd likely receive a far more accurate, updated and thought-out price. The fairly static wealth of an agrarian civilization had liquefied into the dynamic flow of a capitalist society where slaves were becoming mobile units of capital that could be exchanged in a highly liquid capital goods market.⁴⁰³

Besides the internal slave trade and the global cotton boom, other factors also played a role in the capitalization of the slave. The emerging field of slave life insurance, for

⁴⁰² On the internal slave trade see Tadman, *Speculators and Slaves*, data taken from chart on page 12; Johnson, *The Chattel Principle*; Johnson, *Soul by Soul*.

⁴⁰³ On the accounting books see Rosenthal, "Slavery to Scientific Management." On slave traders see Wendell Stephenson, *Isaac Franklin: Slave Trader and Planter of the Old South* (Cambridge, 1968); Bancroft, *Slave Trading in the Old South*.

instance, forced even less business-oriented slave-owners to think about the future revenue stream they would receive from their slaves. You could not answer the question "How much should I insure my slave for?" without first capitalizing them. Like the slave market, life insurance companies were sites of capitalist education and discipline as they served, much like slave traders, as experts on the "proper" price of certain slaves.⁴⁰⁴ Banks also played a crucial role in the transformation of slaves into capital when they began to lend out mortgages to buy slaves. Should I purchase a slave on credit for 8 percent interest? Like any investment made on credit, a slave-owner would only mortgage a slave if they had already answered this question by contemplating the return they would get by pricing the slave's future productivity. After all, before purchasing a slave with credit the slave-owner needed to know if the cotton-picking abilities of the slave would cover the interest as well as the principal of the loan.⁴⁰⁵ Finally, the urban industrialization of slavery played an important role in the capitalization of slaves as well. 31 percent of all urban slave workers had been hired out in the antebellum south. Hiring slaves out required slave owners to price not only the market value of their slave but their annual earnings. Do I ask for 10 dollars a year or 12? Only by pricing the slave's market productivity could that question be answered.⁴⁰⁶

⁴⁰⁴ On the rise of slave life insurance see Todd Savitt, "Slave Life Insurance in Virginia and North Carolina" *The Journal of Southern History*, vol 43:4 (Nov, 1977) 583-600; Sharon Murphy, *Investing in Life: Insurance in Antebellum America* (Baltimore: Johns Hopkins University, 2010).

⁴⁰⁵ On the financialization of slaves see Edward Baptist, "Toxic Debt, Liar Loans and the Securitized Human Beings, and the Panic of 1837," *Capitalism Takes Command*; Richard Kilbourne, *Slave Agriculture and Financial Markets in Antebellum America* (London, Pickering and Chatto, 2006).

⁴⁰⁶ On the hiring out of slaves see Fogel and Engerman, *Time on the Cross*, 56; Richard Wade, *Slavery in the Cities of the Old South* (New York: Oxford University Press, 1964).

As the main social goal of southern slave-owners shifted from the patriarchal-commercialism's objective of proprietary power over enslaved people to the capitalist objective of investment maximization, and as slaves came to be seen not only as property but as capital, southerners began to view slave productivity not only as a marker of their plantation's success but southern progress overall. No one demonstrates this clear connection between market productivity figures collected on slave plantations and the economic indicators used to praise southern progress more than South Carolina Senator James Henry Hammond. As historian Drew Faust has demonstrated in great detail, Hammond was a very business-oriented planter. On the day that he arrived on the plantation he received through his wife's inheritance, he conducted a "slave census." Soon later, he calculated what the capital returns of the previous plantation owner had been and discovered that it was less than one percent. As a result, he shifted his slaves to the far more productive and industrial form of "gang labor." He also began to keep careful track of how much cotton his slaves picked and often used contests to try and boost their productivity.⁴⁰⁷

As a result, Hammond was constantly calculating his slave's productivity as well as the return they yielded him. In a document he titled "Crop Statistics for Silver Bluff," he calculated that he earned a profit of \$215 a year from each slave.⁴⁰⁸ Keeping close tabs on his overall revenue, in 1841 he noted how his annual income averaged \$12,500.⁴⁰⁹ Finally, Hammond was very aware of what other slave-owners were doing (thanks to the market

⁴⁰⁷ *James Henry Hammond and the Old South: A Design for Mastery* (Baton Rouge: Louisiana State University, 1982).

⁴⁰⁸ "Crop Statistics for Silver Bluff" James Henry Hammond Papers, microfiche, Library of Congress.

⁴⁰⁹ "Hammond Diary, Nov 5, 1841, Hammond Papers, LOC

productivity statistics he received in magazines such as *De Bow's*) and felt the need to prove his social worth as a planter by squeezing more money out of his slaves than others. "I feel a strong desire to beat the western planters," he wrote to his close friend Edmund Ruffin, "on my whole crop, per acre, and per hand."⁴¹⁰

By the late 1850s Hammond's focus on his slaves' market productivity transformed from a tool used to maximize his plantation's profits to a tool used to measure southern society as a whole. In his *Cotton is King* speech, Hammond spent a great deal of time carefully comparing northern and southern productivity statistics in order to show that the South produced \$220 million a year while the North only \$95 million. "If I am right in my calculations as to \$220,000,000 of surplus produce," Hammond concluded, "there is not a nation on the face of the earth, with any numerous population, that can compete with us in produce per capita. It amounts to \$16.66 per head." Just as Hammond would measure the productivity of his slaves every night with a whip and a slate, so he chose to measure the progress of southern society.⁴¹¹

An Investor's Millennium: The Statistical Revolution of the Railroad

In 1851, the wealthy railroad investors of Boston, a city that was undoubtedly the antebellum heart of American railroad finance, decided to organize a celebration in honor of the "completion of various lines of Railway, which connect the Canadas and the Great West with the Tide Water at Boston." To prepare for the celebration, a number of committees were organized. There was a committee "to arrange for the meeting of the merchants," for "fireworks," for a "harbor excursion," as well as a committee in charge of

⁴¹⁰ Hammond to Ruffin qtd in Faust, *Hammond*, 111. See also Hammond's article "Report of the Committee of the Barnwell Agricultural Society" *Farmers Register* 9, October 31 1841 for even more productivity figures.

⁴¹¹ Hammond, *Speeches and Letters*, 312-315.

creating a statistical “tabular representation of the present condition of Boston in relation to railroad facilities, foreign commerce, population, wealth, and manufacturers.”⁴¹²

The statistical report that was eventually written contained a great deal of figures which calculated the different Boston railroads’ gross earnings, costs and profits (“the net income was more than 6 per cent”) while also keeping track of real estate values, manufacturing output, freight tonnage and population growth. Desiring an accurate estimate of daily passenger traffic, a committee even paid a private police force of 55 men to spread out across the city from 630AM to 730PM on September 6th 1851 in order to count the number of passengers who came in (41,729) and out (42,313) of the city on a given day. As the report demonstrated, a great deal of people now used the railroad to come to Boston: 11,963 came by train, 14,310 by foot and only 127 by horseback.⁴¹³

As American historians have long recognized, the railroad revolutionized American society in countless ways: Railroads were the first large, multi-unit corporation in American history. They developed new forms of corporate management, finance and control. They turned the American stock market from a backwater institution into a global powerhouse. They attracted massive flows of capital from across the world. They had a dramatic effect on the natural environment. They helped create robber barons, the Knights of Labor, the Granger movement, grain elevators, and Chicago. They radically altered politics, power relations and labor conditions. They annihilated time and space. Railroads, however, also brought with them a statistical revolution. The fact that railroad investors

⁴¹² Ellis Sylvester Chesbrough, *Tabular representation of the present condition of Boston, in relation to railroad facilities, foreign commerce, population, wealth, manufactures* (Boston, 1851); On Boston as the center of railroad capital in the 1850s see Arthur Johnson and Barry Supple, *Boston Capitalists and Western Railroads: A Study in the Nineteenth Century Railroad Investment Process* (Cambridge: Harvard University Press, 1967).

⁴¹³ Chesbrough, *Tabular Representation*, 16

chose to celebrate not only with fireworks and harbor tours but statistical tables was no coincidence. Statistics were part and parcel of the railroad revolution. Railroads, as William Cronon has noted, "generated vast new quantities of statistics which themselves helped revolutionize the American economy by making possible increasingly intricate analyses of trade and production."⁴¹⁴ To fully understand the statistical revolution that the railroads wrought, however, we must first look back at canals, the state-run predecessors that privatized railroads quickly made obsolete.⁴¹⁵

One of the most profound moments in American history came when the toll statistics from the first Erie Canal comptroller report were published in the winter of 1825. These toll reports, which translated how much freight traffic had been transported on the canal into earnings in dollars and cents, were published in all the local newspapers along the canal corridor, from the *Rochester Telegraph* to the *Ithaca Journal*. Most importantly, however, these reports caught the eye of New York elites. While many New York businessmen supported the state's construction of the Erie Canal by purchasing state bonds, many others were wary about investing so much capital into such a massive and novel transportation project. That was the main reason the canal became a state project in the first place – American and European capitalists were unwilling to risk so much money in such an unprecedented act of human engineering. All that began to change with the first

⁴¹⁴ Cronon, *Nature's Metropolis*, 81.

⁴¹⁵ Besides Cronon, on the railroad revolution see Alfred Chandler, *The Visible Hand*; Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: W.W Norton, 2011); Johnson and Supple, *Boston Capitalists*; William Roy, *Socializing Capital: The Rise of the Large Industrial Corporation in America* (Princeton: Princeton University Press, 1997); Frederick Albert Cleveland, *Railroad Promotion and Capitalization in the United States* (New York, 1909); Dorothy Adler, *British Investment in American Railroads* (Charlottesville: University of Virginia, 1970); Thomas Cochran, *Railroad Leaders, 1845-1890: The Business Mind in Action* (Cambridge: Harvard University Press, 1953) Stephen Salisbury, *The State, The Investor and the Railroad: The Boston and Albany, 1825-1867* (Cambridge, Harvard University Press, 1967).

canal comptroller report in 1825. Quickly digesting the toll data it had received, the *New York Evening Post* excitedly noted that “together with the tolls, the debt will be paid in about ten years...the duty on the salt may be removed and leave an income to the state of about one million per annum.” The traffic statistics that the canal created had suddenly made the very risky into the very quantifiable: Not only would the Erie Canal pay back its debts, it would be immensely profitable.⁴¹⁶

The canal tolls, however, did more than just whet the appetite of capital. They also changed the way investors viewed the United States and its inhabitants. Below is an article from the *Albany Argus* which includes a few tables taken from the canal comptroller report in 1826. Next to each town along the canal corridor appears the amount of revenue that the canal had earned from their respective tolls. Just by glancing at this one chart, capitalists could get a sense of the market output of each town. The citizens in the town and hinterland of Palmyra and Port Byron, this chart reveals, were clearly producing more goods for the market than those of Rome or Little Falls. The canal was not initially designed to become a generator of market statistics – but that’s precisely what happened. Never before had American investors been able to get such a clear and concise sense of the American people’s market productivity. As we saw in earlier chapters, attempts were made in the 1810 and 1820 census –but they failed miserably. Unsurprisingly then, canal toll reports soon became staples of the American statistical vision. They appeared in newspapers, gazetteers, daily newspapers and government reports. Often tabulated much like the chart below, these reports translated the labor of the American people and the

⁴¹⁶ *New York Evening Post*, February 11th 1825; *Rochester Telegraph*, Feb 8 1825; *Ithaca Journal*, Feb 9 1825.

products of American land into a single, easily digestible number. While slave-owners in the south were pricing people, the canals in the north were pricing whole towns.⁴¹⁷

From the Albany Argus & City Gazette.

The Canal Tolls.—The following is a correct exhibit, from the returns in the Comptroller's department, of the amount of tolls received by the respective collectors at the places mentioned, during the year 1826. The total amount of tolls in the year, it will be perceived, is \$765,780 10. The sum estimated by the Canal Commissioners in their last annual report, was \$750,000. Thus, in every instance, have the favorable results of our great works of improvement exceeded the estimates, whilst at the same time, they have confirmed the general accuracy of such estimates.—The amount of tolls received in 1825, was \$521,343 94.

ERIE CANAL.	
Albany,	\$120,354 12
West Troy,	45,354 88
Schenectady,	35,806 83
Little Falls,	8,470 25
Utica,	45,892 43
Rome,	26,872 98
Syracuse,	53,422 61
Port Byron,	84,785 40
Lyons,	26,398 89
Palmyra,	76,944 79
Pochester,	96,923 20
Brockport,	12,593 42
Albion,	14,299 93
Lockport,	7,012 02
Black Rock,	7,013 03
Buffalo,	19,555 52
	\$686,700 30
CHAMPLAIN CANAL.	
Waterford,	\$11,486 37
Saratoga,	3,284 98
Fort Miller,	4,439 08
Fort Ann,	2,227 06
Whitehall,	46,460 84
Fort Edward,	8,164 62
	\$76,062 95
CAYUGA AND SENECA CANALS.	
Seneca Falls,	\$1,388 46
Waterloo,	1,628 39
	\$3,016 85
Total amount of tolls in 1826,	\$765 780 10.

Figure 12: Canal Toll Statistics. Erie Canal tolls allowed investors not only to track the income earned from domestic commerce but to imagine whole cities as a series of prices. *New York Spectator*, December 26th, 1826.

⁴¹⁷ For examples of canal toll statistics see William Darby, *A New Gazetteer of the United States of America* (Hartford, 1833) 439-451, esp 448; "Finances of Pennsylvania," *Niles Weekly Register*, April 27th 1833; *The American Almanac*, 1 (1830): 265; Samuel Hazard, *Hazard's Register of Pennsylvania*, 12 (1833):63,96, 141-3; John Disturnell, *Disturnell's Gazetteer of the State of New York* (1843), 40.

As capitalists began to calculate the profits that could be reaped from transportation, they began to pour massive amounts of capital into other canal projects as well. In the same year the canal reports were first published, the Ohio state government easily sold \$400,000 worth of canal bonds to the first Wall Street syndicate in American history led by Nathaniel Prime, John Jacob Astor, John Robins and John Bone. By the mid-1830s, New York and Boston businessmen began to realize that instead of lending capital for state projects, they could own their very own privatized, highly capitalized, revenue-making transportation systems. The railroad revolution had begun. Railroad construction, however, required enormously unprecedented amounts of capital. It was never easy to get American or foreign investors to place their precious capital in novel endeavors. As with the Erie Canal toll reports, therefore, statistics became a crucial tool in convincing investors - local or foreign, small or large - to put their money in railroads. For investors to part ways with their money, they needed to first imagine their profits. Statistics allowed them to do so.⁴¹⁸

One of the first Americans to realize the power that numbers could have in the world of railroad finance was Boston newspaper editor and railroad booster Nathan Hale. Hale was raised in Westhampton, Massachusetts and briefly taught math at Phillips Exeter Academy where he discovered his love of the quantitative. In 1814 he purchased the *Boston Daily Advertiser*, the first daily newspaper in Massachusetts. A fanatic about railroads, Hale would go on to become the first president of the first steam railroad in America, the Boston

⁴¹⁸ On canals see Roy, *Socializing Capital*; Harry Scheiber, *Ohio Canal Era: A Case Study of Government and the Economy* (Athens: Ohio University Press, 1969); Carter Goodrich, *Canals and American Economic Development*. On the crucial shift from public canals to private railroads see also Louis Hartz, *Economic Policy and Democratic Thought: Pennsylvania, 1776-1860* (Cambridge, Harvard University Press, 1948).

and Worcester. Concurrently, he ran and edited the *Advertiser* until 1854. A proud Brahmin, Hale married Sarah Preston Everett, the sister of the powerful businessman, orator and politician Edward Everett. The *Advertiser* soon became the mouthpiece of Brahmin capital, and Hale's son would later recall "seeing his mother rock the cradle in which reposed his sister...whole [Daniel] Webster and Judge Story dictated to her speeches that were to appear in her husband's paper."⁴¹⁹

When Hale first began preaching for a railroad between Boston and Albany in the 1820s few listened to him. He recalled in his own memoirs how his closest friends left his house "with expression of pity," after he had tried to convince them of the railroad's practicality. A competing paper in Boston referred to Hale's proposed Boston and Albany railway as "a project which everyone who knows the simplest rule of arithmetic to be impracticable, but at an expense little less than the market value of the whole territory of Massachusetts; and which, if practicable, every person of common sense knows would be useless as a railroad from Boston to the moon." As this quote suggests, Americans in the 1820s apparently did not yet wield the capitalizing arithmetic needed to invest in railroads. Hale, however, would devote the next 30 years of his life to changing precisely that.⁴²⁰

In 1829, Hale became the head of the Board of Directors of Internal Improvements of the State of Massachusetts in order to carry on an "educational campaign" for railroads. The first step of this campaign was a report, largely written by Hale, "on the practicability and expediency of a Railroad from Boston to the Hudson River and from Boston to

⁴¹⁹ Hale Family Papers, Sophia Smith Collection, Smith College, Five Colleges Archives, Northampton, MA. Edward Everett Hale quoted in Hale Family Papers, Biographical Note.

⁴²⁰ Hale memoir can be found in Hale Family Papers; For Hale's statistical obsession with railroads see Nathan Hale Papers, *Library of Congress*; folder 1-3, passim which are filled with endless doodles in which he thought to estimate the future revenue of the Boston and Albany Railroad.

Providence.”⁴²¹ In this report, Hale began by first citing an engineer’s estimates regarding the costs of constructing a railroad to Albany and Providence. Shifting to the future potential income of these railroads, Hale turned to a diverse array of market output statistics he had apparently been collecting for years. The figures Hale cited, such as the amount of merchandise imported each year from Albany to Boston (roughly 6,091 tons), the number of passengers that traveled each year between the two towns (23,475) or the cords of firewood (120,000) Boston annually consumed, allowed him to present a seemingly rationalized, empirical and accurate estimate of how much money the railroad would make.⁴²² When Hale sought to measure “the business of the country lying between Boston and Albany,” however, he was forced to admit that “this is a branch of our inquiry in which it is difficult to attain that degree of certainty which is desirable.” As a result, Hale explained to the reader that “agents have been employed to visit most of the towns in the counties of Berkshire, Franklin, Hampshire, Hampden and Worcester, and to procure on the spot, from the best sources of information, estimates of the amount of merchandise brought from the seaboard into each town, for the supply of the inhabitants ; the amount of produce carried from each, to the seaboard; the amount of raw materials brought into each town, for the use of the manufacturing establishments; and the quantity of manufactured goods carried abroad.”⁴²³

Hale was not the only railroad booster seeking better market input/output statistics. By the 1840s, in fact, there was an unquenchable thirst for such figures. As one

⁴²¹ Massachusetts Board of Internal Improvements, *Report of the Board of Directors... on the practicability and expediency of a Railroad from Boston to the Hudson River and from Boston to Providence* (Boston, 1829).

⁴²² Ibid, 28

⁴²³ Ibid, 30.

Pennsylvania railroad booster grimly noted in 1841, "all who, as holders of stocks, capitalists, and dealers, are pecuniary interested in the financial history and condition of the commonwealth, have long felt and lamented the want of necessary and accurate information. To learn anything, an examination of various and scattered documents was required, and the statistics there given were always dubious and often most incorrect."⁴²⁴ Was the fact then that the 1840 and 1850 censuses were the first to try and supply precisely these types of statistics a mere coincidence? Probably not. While there is no "smoking gun" linking the 1840 or 1850 census to railroad boosters, the fact that Archibald Russell was a leading member of the American Geographical and Statistical Society, an organization that put railroad investment at the forefront of its concerns, suggests that those pushing for an expanded agricultural and manufacturing data in the 1850 census had railroads on their mind when doing so.

Thanks to the data collected on agriculture and manufacturing in the 1840 census, by the 1840s there was no need for railroad boosters to send agents out across the land as Hale was forced to do. As a result, the market productivity statistics which appeared in the census soon became staples of the railroad booster's report. In 1844, for example, businessmen looking to build a railroad from Providence to Worcester explained how the "following statements are presented, to exhibit the inducements it offers for capitalists to subscribe the means necessary for its construction." They then went on to supply an array of productivity statistics taken from the 1840 census, such as the fact that "a papermaker

⁴²⁴ John Hammond, *Tabular Statement of the Cost, Revenue and Expenditures of the Several Finished Lines of the Canals and Railroads of the Commonwealth* (Harrisburg, 1841).

employs fourteen hands, pays freight on more than four hundred tons of merchandize and ships to New York one hundred tons annually."⁴²⁵

In 1845, the New York and Hartford Railroad published a similar report in order to estimate "the amount of business, transportation and travel in the immediate vicinity of the line, and the annual income it is reasonable to expect on the first opening of the railroad."⁴²⁶ At the center of this report was the table found below. Similar to the canal toll figures, the table below - which was typical of the age - supplied an array of statistics on the towns that would be situated on the future railroad. Thanks to the 1840 census, this table could now supply the reader with town-by-town information on the number of people, cotton and wool mills, spindles, looms, yards of cotton and woolen cloth produced per week, bales of cotton and pounds of wool consumed per year, "machine shops," as well as the number of females and males employed. Calculating freight costs and passenger prices, the table then aggregated all this market productivity into two prices: The estimated amount the railroad would earn in each town and from passengers and from freight. Once again, we see how the desire for railroads was leading Americans to price the market productivity of whole communities.⁴²⁷

⁴²⁵ *Facts and Estimates relative to the Business on the Route of the contemplated Providence and Worcester Railroad*; (Providence, 1844).

⁴²⁶ *Report of Committee upon the statistics of business and of the engineer upon the survey of the several routes for the contemplated New York and Hartford Railroad via Danbury*. (Hartford, 1845), 4.

⁴²⁷ *Ibid*, 25.

Once a railroad was built an explosion of statistical data ensued. Suddenly, the income statistics from freight and passenger traffic were no longer an estimate but a reality, (albeit likely an exaggerated one in the annual railroad reports.) All one had to do was analyze the traffic data in these annual reports in order to capitalize the market productivity of the American people into present or future returns. This is precisely what Henry Varnum Poor did as the financial editor of the *American Railroad Journal*, and it was a huge success. In the 1850s alone, five weekly and two monthly railroad periodicals were begun. Poor, however, led the way. The *Railroad Journal's* subscription list increased from only 12,000 in 1849 to 30,000 in 1854. Consuming hoards of data on railroad's operational costs and incomes, Poor digested and translated these figures into easy-to-read profit-oriented statistics and tables. Poor was not only conveying a series of objective numbers but also a social vision of capitalized growth. "With accumulated capital, which represents time, we can in fifty years reach a point which, without it, it would take us two hundred to attain," he exclaimed with growth-maximizing excitement in one typical article.⁴²⁸

As a financial journalist who gave statistical advice as to where capitalists should invest their money, Poor was constantly quantifying American towns and the people who populated them into incoming yielding sources of capital gains. He understood that while profits may appear to come from the abstracted financial instruments known as railroad bonds that were traded in the now booming New York stock market, the true source of these capital gains lay in the American people who lived in the small villages and farms that

⁴²⁸ Poor, *American Railroad Journal*, 25 (1852): 506; For railroad freight and passenger statistics that calculated the income of railroads look at any annual railroad corporate report of the era at the Baker Library Archives, Harvard Business School. For a sampling of the digested data prepared by Poor from a single volume see *American Railroad Journal*, 25 (1852): 232, 410-411; 506-7; 552; 561-2; 600, 776, 689-90.

dotted the American landscape. Poor's financial data, in short, was not just capitalizing the iron tracks that were crisscrossing America but the millions of farmers, factory workers, artisans and shopkeepers across America who produced and distributed the goods that rode the rails. Is it any wonder then, that when Poor turned to compare the progress of the North with that of the South in a series of *New York Times* articles he used the very same economic growth and market productivity statistics that he used to measure the future stock dividend of a railroad corporation?

The same pattern appears in the journalistic work of Thomas Prentice Kettell and Nathan Hale. For three generations, Nathan Hale supplied his Brahmin readership with a steady stream of railroad statistics through the pages of his *Advertiser*. As with Poor, these figures depicted the inhabitants of Massachusetts as income yielding units of railroad capital. Kettell loved to write about the wonders of the railroad and, like Poor, he disseminated a statistical vision of capitalized growth as social progress in his newspaper articles. "Why the railroads of Massachusetts have cost 50,000,000, and the wealth of the state has increased 300,000,000 or six times the amount in ten years," Kettell gushed in a typical statement. "That is to say, from the land at Plymouth to 1840, two hundred years elapsed, in which the wealth of Massachusetts reached \$299,878,327. Ten years of railroads have added a sum equal to the whole results of those two hundred years. Is that not a railroad pace?"⁴²⁹ As with Poor, when Kettell turned to the question of Northern and Southern progress, he too chose to measure societal wellbeing with the same capitalizing statistics he gauged railroad profits.

⁴²⁹ Kettell, "Influence of Railroads."

Seeing how potential American railroad investors were being bombarded by Hale, Poor and Kettell's statistics which depicted the American people as potential sources of income throughout the 1840s and 1850s, it is not surprising that Hinton Helper's 1857 narrative, which used the same type of productivity statistics to measure the progress of American society, became a best-seller among American elites in the north. In early and Jacksonian America, few American businessmen were directly dependent on national, regional or even local productivity growth for their own pecuniary benefit. But as a class of merchants, shopkeepers and manufacturers slowly transformed into a class of railroad investors, their own day-to-day investment gains began to be closely intertwined with the market productivity of iron welders in Worcester, dry goods merchants in Cincinnati or seamstresses in Chicago. Market statistics became the medium through which these connections were first forged and understood. These figures, in short, changed the way investors saw the American people while also teaching them that their own economic success hinged on the American people's market productivity. As a result, they came to conflate market productivity with progress, equate capital accumulating with societal wellbeing and measure everyday life not with moral statistics but capitalist ones.

Conclusions

There might not be a greater set of dichotomies in the American historical imagination than the ones that the Civil War helped to create: North vs. South, Union vs. Confederacy, wage labor vs. slave labor, modern vs. anti-modern, freedom vs. slavery. These dichotomies, of course, are not inaccurate: By antebellum times, the north and the south were very different societies in countless different ways, especially when it came to the life experiences of wage laborers and slaves. The notion that one can compare the

horrors of slavery to wage labor is both ridiculous and perverse. Nevertheless, the enormous differences between slave plantations and northern factories have obscured some of the ideological similarities which existed in these two societies, especially amongst the economic elite of each region. As I hope this chapter has demonstrated, railroad investors and slave planters were quantifying the people of their respective societies in comparable ways, a fact that led to clear similarities in the way northern and southern elites began to measure social progress in the 1850s. While the fact that planters needed whips to attain their information while railroad investors needed only reading glasses must never be forgotten or downplayed, we must also remember that the pricing of people did not end with Appomattox.

In blurring some of the lines between northern and southern society, this chapter has hoped to add to a rich new research regarding the linkages between slavery and capitalism.⁴³⁰ While other historians have rightly begun looking at plantation practices, networks of exchange or global accumulation of capital in order to tie slavery to capitalism, this chapter explored the ideological overlap between North and South that emerges when one examines the ways in which elites in these societies measured social progress.

If historians are to make a convincing argument regarding the capitalist nature of slavery, however, they are going to have to challenge Eric Foner, Eugene Genovese, Barrington Moore and David Brion Davis' incredibly convincing narrative that, in the end, the Civil War was fought over two incompatible social systems. In this chapter, I hope I have taken a small step in that direction by taking a closer look at how northern and southern elites invested their westward moving capital. Such an examination of capital

⁴³⁰ See Sven Beckert and Seth Rockman, *Slavery's Capitalism*, forthcoming.

flows – and it is important to note that neither railroads nor the internal slave trade appear prominently (if at all) in Foner, Genovese, Moore or Davis' narratives – allows us to see not a tale of two irreconcilable ideologies but rather a tale of two, albeit very different, forms of capitalism.

Chapter Six

Capitalization and its Discontents: Labor Statistics in Gilded Age America

On March 3rd, 1893 Senator Nelson Aldrich, head of the powerful Senate Finance Committee, submitted a report to Congress titled “Wholesale Prices, Wages, and Transportation.” Known at the time as the Aldrich report, it has become a mere footnote in American history. Glance at the report, and one immediately comes to understand why. After a few pages of brief introduction, the 658 page report was made up almost entirely of pages upon pages of statistical indices which measured the wholesale prices of every major commodity, including labor, in American society from 1840 to 1891. For example, below is a typical table listing the indexed wages of different textile workers, with 1860 as the baseline (and hence equal to 100.0). The entire report was filled with fifty-year price indices such as in the image below, be they on wages, food or clothes prices.⁴³¹

Statistically speaking, it was a gargantuan task of epic bureaucratic proportions. The report included no less than eleven statistical appendices. Appendix A alone included 84 statistical tables. In generating a fifty-year time series on food prices, the report tracked the price of 53 articles, from Boston Crackers to Nutmeg. For the “cloths and clothing” section, the report charted the price of 28 articles, from “bleached sheetings” to “Ohio fine fleece.” Finally, in creating a fifty year time series on the price of labor, which included the chart on textile wages seen above, the report tracked the changing wages of over five hundred occupations, from textile “waste sorters” to “bricklayers’ helpers.”⁴³²

⁴³¹ *Wholesale Prices, Wages, and Transportation: Report by Mr. Aldrich from the Committee on Finance, Part I* (Washington, 1893). From hereon report will be referred to as *Aldrich Report*.

⁴³² *Aldrich Report*, 27-184.

TABLE 37.—Rates of wages for 52 years—Relative wages—Continued.

COTTON GOODS—Continued.

[The figures in the heading indicate the establishment number as tabulated in Table XII.]

Year.	39. Card grind- ers.	40. Card grind- ers.	41. Card grind- ers.	38. Card strip- pers.	39. Card strip- pers.	40. Card strip- pers.	41. Card strip- pers.	38. Carpen- ters.	39. Carpen- ters.	40. Carpen- ters.	41. Carpen- ters.
1840.....		108.4				88.1				80.9	
1841.....						66.2					
1842.....		111.4				93.4				92.3	
1843.....	110.2	113.9			97.6	89.4			79.2	90.9	
1844.....	100.6	100.6			97.6	90.1			72.9	84.2	
1845.....	106.0	99.4			97.6	60.9			76.4	82.9	
1846.....	101.8	101.8			102.4				81.0	84.6	
1847.....	98.8	110.2			102.4	104.0			79.9	86.6	
1848.....	109.6	108.4			102.4	106.0			87.7	80.9	
1849.....	104.8	101.8			102.4	101.3			82.0	91.3	
1850.....	107.8	98.2			102.4	102.0			87.0	88.3	
1851.....	103.0	108.4		76.8	102.4	102.6			90.5	95.3	
1852.....	109.6	108.4		81.7	102.4	101.3			87.7	93.0	
1853.....	100.0	100.0		97.9	96.0	106.0	109.9	77.0	97.2	92.6	100.0
1854.....	110.2	100.0	89.8	97.9	102.4	106.0	109.9	77.0	93.0	94.6	100.0
1855.....	103.0	96.4	109.6	100.0	102.4	106.0	109.9	95.7		104.7	116.7
1856.....		101.2	109.6	100.0	96.0	106.0	109.9	95.7		98.3	116.7
1857.....		105.4	109.6	100.0		106.0	117.4	95.7		103.7	100.0
1858.....		105.4	100.0	94.4		102.0	87.6	95.4		109.1	100.0
1859.....	100.6	100.6	100.0	100.0	96.0	102.6	102.5	101.0	96.8	101.7	100.0
1860.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1861.....	110.2	105.4	119.8	95.8	111.2	99.3	109.9	102.3	97.5	104.0	100.0
1862.....	113.9	105.4	119.8	112.7	112.0	99.3	109.9	113.5	98.2	105.4	100.0
1863.....	110.2	106.0		140.8	96.0	100.0		113.5	90.5	103.0	
1864.....	150.6	180.7		102.0	120.0	165.6		131.6	106.3	128.2	
1865.....	160.2	178.9		190.1	179.2	180.1		168.1	143.0	127.9	
1866.....	201.8	189.2	209.6	190.1	179.2	180.1	175.2	164.5	146.8	141.3	200.0
1867.....	191.0	194.0	224.6	190.1	179.2	185.4	186.0	170.1	143.7	153.0	216.7
1868.....	169.9	190.4	224.6	181.7	160.0	178.1	206.6	170.1	151.4	148.0	216.7
1869.....	190.4	190.4	224.6	181.0	160.0	180.1	206.6	170.1	148.6	153.7	200.0
1870.....	173.5	188.6	179.6	164.1	146.4	180.8	206.6	170.1	148.2	146.6	200.0
1871.....	180.7	197.6	224.6	190.8	159.2	189.4	206.6	164.5	156.0	153.0	183.3
1872.....	177.7	203.0	224.6	188.0	140.0	190.1	206.6	164.5	158.5	156.7	183.3
1873.....	177.7	187.3	224.6	187.3	159.2	179.5	206.6	175.3	159.2	152.0	183.3
1874.....	171.1	168.7	201.8	171.1	162.4	167.5	200.0	156.3	158.5	142.6	150.0
1875.....	160.2	166.3	201.8	133.8	140.0	160.9	179.3	137.2	154.9	143.0	158.3
1876.....	158.4	165.7	159.9	123.9	128.0	157.6	192.6	119.4	156.7	133.2	140.0
1877.....	150.6	168.7	150.9	103.5	112.0	151.7	195.9	109.5	138.4	128.2	125.0
1878.....	150.6	169.3	150.9	109.2	112.0	148.3	195.9	116.8	141.9	126.2	125.0
1879.....	168.7	168.7	159.9	119.7	136.0	125.8	195.9	130.3	121.1	124.5	125.0
1880.....	168.7	168.7	159.9	133.8	136.0	124.5	195.9	127.6	122.2	124.2	125.0
1881.....	171.1	168.7	164.7	133.8	152.0	126.5	213.2	127.6	137.3	123.8	125.0
1882.....	182.5	168.7	169.5	133.8	160.0	117.9	213.2	127.6	140.1	121.8	122.3
1883.....	182.5	168.7	169.5	133.8	160.0	123.8	186.0	144.1	134.2	128.5	122.3
1884.....	177.7	168.7	169.5	133.8	152.0	125.8	186.0	144.1	133.5	129.9	122.3
1885.....	177.7	183.7	169.5	133.8	152.0	132.5	165.3	130.9	131.7	132.2	111.1
1886.....	172.9	183.7	169.5	157.0	160.0	132.5	165.3	124.7	133.5	131.9	111.1
1887.....	168.7	183.7	169.5	217.6	160.0	132.5	165.3	124.7	132.7	130.2	111.1
1888.....	180.7	183.7	169.5	217.6	160.0	125.8	200.0	124.7	128.2	132.9	111.1
1889.....	177.7	183.7	179.6	217.6	160.0	129.1	200.0	124.7	129.6	133.2	111.1
1890.....	177.7	183.7	179.6	217.6	160.0	135.1	200.0	124.7	135.2	135.2	111.1
1891.....	176.5	183.7	179.6	184.5	160.0	135.1	200.0	124.7	139.1	130.2	111.1

Figure 14: Aldrich Report. A typical page from the Aldrich Report, this table traces the relative wages in the textile industry from 1840 to 1861. *Aldrich Report*, 123.

While much of the data was gathered, organized and tabulated by Carroll Wright, the Commissioner of the recently-formed Department of Labor, the Aldrich report also

received a great deal of statistical assistance from businessmen. The Manufacturing Chemists' Association supplied the price series on drugs, the National Association of Wool Manufacturers on wool, and the Bostonian Arkwright Club on cotton textiles. When trade associations were not available, Wright turned to the heads of private companies. The American Screw Company gave the price of screws, Roxbury Carpet Company the price of carpets, New York Knife Company the price of pocketknives, and Nicholson File Company the price of files.⁴³³

Why did the finance committee devote so much time to such a painstaking collection of price data across a fifty-year time span? Why were businessmen and trade associations from across the country, not usually known in the nineteenth century for their eagerness to share their business data, willing to expend so much energy for a government report? To answer these questions we must first understand the main goal of the Aldrich report's price indices, which was "to ascertain through accurate and adequate statistics of prices and wages, the changes which have taken place in the condition, as shown by the relative purchasing power of their earnings, of the great mass of people in the country for the half century which has just closed." Imagining Americans, not only in 1890 but also in 1840, solely as market consumers and wage earners, the basic premise of the Aldrich Report was that in order to measure the prosperity of the American people all one had to do was compare wages to cost-of-living. "The relative standard of life at the different periods," the

⁴³³ *Aldrich Report*, 6-7; On Carroll Wright's career as a labor statistician see James Leiby, *Carroll Wright and Labor Reform: The Origins of Labor Statistics* (Cambridge, 1960); See also Mary O. Furner, "Knowing Capitalism: Public investigation and the labor question in the long Progressive Era", Supple and Furner eds., *The State and Economic Knowledge: The American and British Experiences* (New York: 1990).

⁴³³ Aldrich Report, 7

report explained, “can, of course, be obtained only from a combination of prices with average earnings or wages.”⁴³⁴

While the Aldrich report’s statistical methods and ideological assumptions were quite novel at the end of the nineteenth century, today they likely seem quite familiar. That is because the Aldrich Report is the direct precursor of the Consumer Price Index, a metric which, as historian Tom Stapleford and others have shown, has had an enormous effect on Americans’ everyday lives, from setting labor contracts to stabilizing the monetary system. As a result, today the logic behind the Aldrich Report seems to be sheer common sense, absent of any ideological underpinnings. What could be more sensible than measuring the prosperity of the American people by tracking whether their wages purchase more or less consumer goods than they used to?⁴³⁵

There was, however, nothing natural or obvious about the Aldrich Report, nor the fact that the statistics it generated went on to become central indicators of American progress and wellbeing. The Aldrich Report’s cost-of-living statistics had a history, and that history can be traced back to industrial cost-accounting techniques. The Aldrich Report was, in other words, the product of the managerial revolution business historian Alfred Chandler has so famously described. It was the child of “The Visible Hand.” Examining how cost-accounting figures shaped cost-of-living statistics, this chapter demonstrates that the managerial statistical tools that Chandler documented ended up being used not only to manage a firm but to run a nation. Chandler was one of the first historians to recognize the

⁴³⁴ *Aldrich Report*, 5.

⁴³⁵ In *The Cost of Living in America*, Stapleford traces the origins of the consumer price index back to the Aldrich Report and Carroll Wright. Focusing mostly on the implementation of CPI in the twentieth century, however, Stapleford does not seek to detail the intellectual, social, political and cultural origins of the Aldrich Report or cost of living statistics.

importance of data in managing a corporate capitalist society. And yet, his life's work focused mostly on firms. This chapter suggests that we need to bravely go where Chandler rarely went before: Beyond the firm. Instead of focusing only on the microeconomics of the corporation, we must explore the macroeconomics of the nation. Instead of only analyzing the "visible hand" of the firm, we must examine the visible hand of everyday life. In doing so, not only can we incorporate the state into Chandler's managerial thesis but also questions of culture, class and power since, after all, we usually do not imagine democratic governments being run with the same tools as giant corporations nor do we realize that the calorie statistics that appear on the sides of our cereal boxes – as this chapter will show – are yet another manifestation of Chandler's Visible Hand.⁴³⁶

How and why did statistics that were designed for maximizing factory production end up becoming the national yardsticks used to measure American wellbeing? As this chapter will demonstrate, it was only in the Gilded Age that a consolidating American bourgeoisie succeeded in capturing the government institutions which determined, to a large degree, how Americans would measure prosperity and value progress in the twentieth century. Focusing on the power struggles over the state bureaus of labor statistics, this chapter will show how adherents of two conflicting statistical visions – one molded by the producerist, free labor ideology of patriarchal commercialism and the other by the profit-maximizing, consumerist logic of mass industrialization – battled over what type of economic statistics should be institutionalized by the state as the standard bearers upon which economic life was to be measured and evaluated.

⁴³⁶ Alfred Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass: Belknap Press, 1977); For the importance of data in the managerial revolution see Chandler, *Visible Hand*, p. 109-120 and Thomas C. Cochran, "The Business Revolution," *American Historical Review*, 78 (1974): 1449-1466.

Taking a closer look at certain crucial moments in this ideological and political battle over economic indicators, this chapter depicts how the formulation of certain controversial statistics by the American labor movement, such as the first income inequality figures in American history, pushed a bourgeois coalition of businessmen, economists and politicians not only to institutionalize their own capitalist statistical vision in the form of cost-of-living statistics but also to construct an elite, expert-based, depoliticized bureaucracy which could be insulated from democratic pressures. Despite a bitter battle by the Knights of Labor for control of the American government's statistic-collecting institutions, this chapter argues that the emerging bourgeoisie's efforts were a rousing success. As the Aldrich Report indicates, by the turn of the twentieth century a corporate capitalist vision that emphasized consumerism, productivity and corporate efficiency was quickly coming to serve as the statistical foundation for the emerging liberal regulatory state and the measure of progress and wellbeing in America.

The Opening Salvo: The Massachusetts Bureau of Labor Statistics

Our story, however, begins not with the Aldrich Report of 1891 but rather the founding of the Massachusetts Bureau of Labor Statistics in the years following the Civil War. In 1869, the Lynn branch of the Knights of St. Crispin, one of the largest trade-unions in the nation, requested an incorporation charter from the Massachusetts state legislature so that their shoemaker cooperative could become a state-sanctioned owner of property. Continuing a trend that began before the Civil War, an unprecedented numbers of corporations were receiving general incorporation charters in Massachusetts in the late 1860s. Yet despite this, the Knights of St. Crispin were denied. Furious, the Crispins left the Republican Party and helped found the Labor Reform Party which, much to the horror of

the Massachusetts elite, garnered a surprising 10 percent of the vote in state elections. Panicked by this sudden political threat, the Massachusetts state legislator hastily sought a way to assuage the anger of the working class. On June 23rd 1869, a resolve originally initiated by Radical Republican Wendell Phillips calling for the establishment of the Massachusetts Bureau of Labor Statistics was passed. It was the first such bureau in the world.⁴³⁷

Along with Ira Steward, a skilled mechanic and the leader of Massachusetts's eight-hour workday movement, Phillips had been lobbying for a bureau of labor statistics that would serve as a political platform which raised awareness to the "labor question" and convince workers, the public, and the state to legislate an eight hour work day. At one of the conventions of Steward's Eight Hour League in 1865, Phillips declared that since "the country was ruled by its brains," laborers needed "something" through which they could "break into that debating society up in the State House and make them discuss the eight hour day." Four years later, that something turned out to be the Massachusetts Bureau of Labor Statistics.⁴³⁸

To please the working classes, it was decided that Phillips would also be allowed to appoint the bureau's chief and deputy. In collaboration with Steward, Phillips chose two pro-labor men to staff the bureau: General Henry K. Oliver and George McNeill. McNeill

⁴³⁷ Charles, F. Pidgin, *History of the Bureau of Statistics of Labor of Massachusetts and of Labor Legislation in the State*; (Boston: Wright and Potter) 1876, p. 23; James Leiby, *Carroll Wright and Labor Reform: The Origin of Labor Statistics* (Cambridge, MA, 1960); On the Knights of St Crispin see Alan Dawley, *Class and Community: The Industrial Revolution in Lynn* (Cambridge, Mass: Harvard University Press, 1976); On the Labor Reform Party and Massachusetts Politics in this era, see David Montgomery, *Beyond Equality: Labor and the Radical Republicans, 1862-1872* (New York: Knopf, 1967).

⁴³⁸ *Daily Evening Voice*, Nov 3rd, 1865; For the politics of Ira Steward, see Montgomery, *Beyond Equality*, 249-260. For Wendell Phillips see Richard Hofstadter, "Wendell Phillips: The Patrician as Agitator," *The American Political Tradition and the Men Who Made It* (New York: Knopf, 1948), 175-211.

was a wage-earning machinist and the President of the Boston branch of the Eight Hour League. General Oliver, on the other hand, was not your typical labor reformer of the era. Like Phillips, he was from one of the finest Massachusetts families and a cousin of Oliver Wendell Holmes. After the Civil War, Oliver became the first ever superintendent of the newly opened Atlantic Mills in Lawrence. There, he witnessed firsthand the difficult conditions of wage laborers and became known for his pro-labor policies. As a result, he did not last long at the mills. Yet while Oliver had great misgivings about the wage-labor system and was not afraid to voice them, he was still a well-respected gentleman. Phillips had found the perfect man for the job.⁴³⁹

As Mary Poovey has noted, for information to be perceived as factual by the mid-nineteenth century, political economists and statisticians were expected to “separate between the descriptive and the interpretive” due to the agreed upon supposition that “systematic knowledge should be derived solely from non-interpretive descriptions.”⁴⁴⁰ The first reports of the Massachusetts Bureau of Labor Statistics, however, did nothing of the sort. With statistical charts appearing only on a handful of pages, most of the quantitative information on wages and hours was supplied via the personal testimonies of workers. Mixing heart-wrenching descriptions of urban poverty and factory conditions with eye-opening statistics on such topics as social mobility, economic independence and women’s factory wages, the bureau harnessed their data to conclude that wage labor was nothing more than “the modern facilities of burglary.” At the end of the report, they

⁴³⁹ On Oliver see Jesse H. Jones, “Henry Kemble Oliver, a Memorial,” Massachusetts Bureau of Labor Statistics (MBLS), 7 (1886):14-24. On George McNeill see George McNeill, *The Labor Movement: The Problem of Today* (Boston, 1887).

⁴⁴⁰ Mary Poovey, *The History of the Modern Fact: Problems in the Sciences of Wealth and Society* (Chicago: Chicago U. Press, 1998), xv-xvii.

summarized their position by providing a list of recommendations regarding what should be done to ameliorate the situation, their central recommendation being the legislation of the eight-hour workday as a first step towards the abolition of permanent wage-labor.⁴⁴¹

The bureau leaders chose not to separate the statistical from the interpretive because they imagined statistics as a means to a political end. Arguing that the bureau's mission was "far greater in importance than figurate returns of industry," Oliver let it be clear that the bureau would not be a "collector of mere facts."⁴⁴² Envisioning the bureau as a political tool and a moral compass, Oliver and McNeil hoped that when the people of Massachusetts read their reports "a cry of mingled surprise and shame and indignation will arise that will demand an entire change of the methods of earning and pay."⁴⁴³ In attempting to appeal to Americans sense of moral justice, the bureau hoped to use to statistics to show that "factory life any way is a bad life, physically, morally, socially and intellectually."⁴⁴⁴

Even when the bureau did include statistical charts these tables did not solely price everyday life through wage and consumer statistics as the Aldrich Report would do a generation later. The bureau believed that "the real and ultimate value of [manufacturing] to the true prosperity and abiding good of the commonwealth can only be learned, by placing money in one scale, and man in the other."⁴⁴⁵ This notion that the human condition could not be encapsulated merely in price statistics led Oliver and McNeill to seek out the

⁴⁴¹ MBSL, *First Annual Report* (1870):23. See also MBSL, *Second Annual Report* (1871).

⁴⁴² MBSL, *First Annual Report*, 8.

⁴⁴³ Ibid, 38.

⁴⁴⁴ Ibid, 131.

⁴⁴⁵ Ibid, 134.

the type of moral statistics that had been popularized in antebellum America such as literacy, time spent at work, education and even time for dinner.

TABLE NO. 3.													
Nationalities, Wages, Hours of Labor, Habits, Education, &c.													
TOWN.	TRADE.	NUMBER OF PERSONS EMPLOYED.						Total.	Number that cannot read or write.	Children that attend school.	Hours of Labor per week.		Time for dinner—hours.
		NATIVE.			FOREIGN.						Adults.	Child'n.	
		Men.	Women.	Child'n.	Men.	Women.	Child'n.						
Egremont, .	Axles, . . .	20	—	—	40	—	—	60	—	—	60	—	1
Springfield, .	Firearms, . . .	180	5	5	15	—	—	205	5	—	60	60	1
Medfield, . .	Bakery, . . .	5	1	—	2	1	—	9	—	—	60	—	1
New Bedford, .	Boilers, . . .	10	—	—	2	—	—	12	—	—	60	—	1
Cambridge, . .	Brushes, . . .	6	3	1	7	30	3	50	3	—	60	—	1
Brighton, . .	Butcher, . . .	9	—	—	22	—	3	34	6	—	60	—	1
Somerville, . .	Bleaching, . . .	3	—	1	133	1	30	168	—	—	62	62	1
Leominster, . .	Buttons, . . .	1	9	—	—	—	—	10	—	—	60	—	1
Salem, . . .	Boots and Shoes, . .	3	—	—	1	—	—	4	—	—	52	—	1
Hopkinton, . .	Boots, . . .	41	3	1	108	16	7	176	—	8	60	60	1
Stoneham, . .	Boots and Shoes, . .	55	65	—	12	15	5	152	—	5	59	48	1
Randolph, . .	" " " " . . .	30	22	—	79	13	—	144	3	—	60	—	1
Brookfield, . .	" " " " . . .	95	40	15	40	—	10	200	24	25	60	60	1
Weymouth, . .	" " " " . . .	5	—	1	1	—	—	7	—	—	—	—	1
Pembroke, . .	" " " " . . .	14	5	1	—	—	—	20	—	—	60	—	1
Webster, . . .	" " " " . . .	85	—	—	40	114	9	248	—	—	60	—	1
Spencer, . . .	" " " " . . .	15	2	—	53	—	—	70	33	—	60	—	1
Westport, . .	Batting, . . .	39	24	21	1	—	2	87	—	All.	67½	67½	1
So. Amesbury, .	Carriages, . . .	7	—	—	8	—	—	15	—	—	54	—	1
Salisbury, . .	" " " " . . .	—	—	—	—	—	—	30	—	—	—	—	—
Taunton, . . .	Cars, . . .	—	—	—	—	—	—	65	—	—	60	—	1
Sandwich, . .	" " " " . . .	30	—	—	—	—	—	30	—	—	60	—	1

Figure 15: The alternative statistics of the Massachusetts Bureau. This table demonstrates how the first Massachusetts bureau reports did not only price people's labor but also tracked literacy, education and time for dinner.

The economic indicators Oliver and McNeill constructed were a statistical reflection of their own producerist and republicanist beliefs regarding what should be defined as "free labor." Yet not unlike the future Aldrich Report, the bureau did sometimes compare wage figures to cost-of-living statistics. But their objective in doing so was *not* to come up with a consumerist "standard of living" but rather to show that wage-laborers had no chance at becoming their own employers because wages were far too low and therefore they could not accumulate any savings. Like Abraham Lincoln and most other Americans of era, the bureau chiefs conceded that if the laborer could earn enough to accumulate his own capital, the wage-system could be legitimized as a stepping-stone to republican,

proprietary independence. Their statistical inquiries, however, illustrated that if the current status quo remained, few workers would have the opportunity to attain self-employment, leaving the wealthy few with a monopoly on credit and capital.⁴⁴⁶

The bureau's statistical indicators exhibited not only the free-labor emphasis on social mobility, self-mastery and proprietary independence but also its demand for equality and disgust of uneven power relations. The kinds of economic growth statistics seen in chapter five did not impress the Massachusetts bureau since these figures did not take questions of distribution into account. "Although manufacturing undoubtedly increases the material wealth of the nation," the bureau noted, "it does it, as now managed, at the expense of its manufacturing people."⁴⁴⁷ Such a fixation on equality and power stemmed from the zero-sum nature of American producerism and a belief in a labor theory of value. Like most Americans of the era, and much like the classical economic theories which prevailed until the neoclassical revolution of the 1880s, the bureau chiefs believed that only productive labor could create wealth. As a result, they thought capital gains emerged out of the same pool of value that workers had created. The notion that capital could earn a six percent return because of the price of time, the scarcity of money, risk premiums or entrepreneurial activity simply was not acceptable within the framework of America's mainstream producerist ideology. Profits, therefore, were envisioned to be the amount of value produced by laborers that, for whatever reason, they did not receive as part of his wages. As a result, American workers in the 1860s and 70s often focused almost as much

⁴⁴⁶ On the "free labor" notion that wage labor was legitimate so long as served as a stepping stone to proprietary independence, see Eric Foner, *Free Soil*. On Lincoln's belief that wage labor should be only a temporary stop on the road to proprietary independence see Hofstadter, "Abraham Lincoln and the Self-Made Myth," *American Political Tradition*, 119-175.

⁴⁴⁷ MBLs, *First Report*, 134.

attention on their employer's profits as they did on their own wages. To prove that men were not receiving a full return of their labor, for instance, Ira Steward pointed to the profits of capitalists in his popular public speeches. "If we had been paid all we earned," he would ask, "would such rich men as A.T. Stewart, William B. Astor and Auguste Belmont have been possible?"⁴⁴⁸

But when the Massachusetts Bureau of Labor Statistics went looking for profit statistics, they discovered that they were almost impossible to collect. When Oliver and McNeill began gathering data for their first reports, they painstakingly wrote a long survey of questions to regional capitalists, manufacturers, financiers and corporate stock owners. These questions included everything from their profits to the spatial dimensions in the workers' work area and the manner in which rooms were heated in the winter. A reflection of the class conflicts already present between employer and employee in postbellum Massachusetts, not one circular was returned. Furious, Oliver turned to the state legislature and demanded that he be given the legal power to summon business owners. His request was denied. The lack of data significantly hindered the bureau's plans. They were left to rely only on the testimonials and data retrieved from laborers. Not only would some readers perhaps find labor's responses unreliable or biased, Oliver feared, but such a lack of data left bureau unable to compare profits to wages and therefore prove what they believed to be an "unequal distribution of wealth."⁴⁴⁹

⁴⁴⁸ Steward, *The Meaning of the Eight Hour Movement* (Boston: 1868), 6-7; On the individualist, self-interested, zero-sum nature of American nineteenth century free labor ideology (and classical economics) see Jeffrey Sklansky, *The Soul's Economy: Market Society and Selfhood in American Thought, 1820-1920* (Chapel Hill: University of North Carolina Press, 2001). Huston, *Fruits of our Labor*; Maurice Dobb, *Theories of Value and Distribution Since Adam Smith* (Cambridge: Cambridge University Press, 1973).

⁴⁴⁹ MBLs, *First Report*, 7-13, 18-19. The term unequal distribution of wealth is used three times in this first report, see 38, 185, 187. Leiby, *Carroll Wright*.

The Battle for the Bureau

Aghast by the bureau's first two reports in 1869 and 1870, Boston's manufacturing and financial elite initially tried to silence the bureau by cutting its budget or abolishing it completely- but to no avail. The problem, it seemed, was that the bureau was gaining quite a following not only amongst wage laborers, but Americans of all walks of life. While the elite, business-minded *Boston Daily Advertiser* continuously slammed the bureau for its questionable findings, many Americans found the first reports compelling. From renowned authors, to professors of political economy to members of Mercantile Library Associations, the list of people who wrote in to commend the bureau on its work read more like a veritable who's who of postbellum middle-class reform than it did of working-class radicalism. The *Lowell Daily Citizen* believed that the bureau's statistical reports were "the best thing...[the] state had done since the War" since "information is the real want of the laborer and the chief requisite to the success of his cause."⁴⁵⁰ *Chicago Tribune's* liberal-minded editor Horace White hailed it as the "virtual inauguration of the church of economists" as "statistics take the place of texts, while facts and figures supersede psalms and prayers."⁴⁵¹ Comparing the labor statistics to Charles Francis Adams Jr.'s "systematic investigation" of the railroads, even the *New York Free Trader* congratulated the bureau for its "admirable method" and "extraordinary accumulation of facts."⁴⁵²

⁴⁵⁰ *Lowell Daily Citizen*, June 2nd, 1871.

⁴⁵¹ *Chicago Tribune*, May 28th, 1871.

⁴⁵² *Free Trader* quoted MBLs, *Fourth Annual Report*, 26.

Others focused more on the report's troubling conclusions, but with no less enthusiasm. A Cincinnati paper exulted at how the report "shows how completely the Lords of the Loom have the workmen under control."⁴⁵³ In an article in the *Atlanta Constitution* titled "Massachusetts Decaying," the Southern author gleefully proclaimed that the "labor statistics show a downgrade in civilization...that would stimulate any other people to drop for a while the management of the universe and attend to home concerns."⁴⁵⁴ Even the well-regarded *Nation* – the center of the Mugwump universe if ever there was one – joined in the chorus. "It is difficult to exaggerate the value of such labor as is so intelligently done by the Bureau of Labor Statistics," noted J.R. Hodgkins, the magazine's leading economic correspondent. Continuing, he wrote:

The proofs are numerous and unmistakable to the almost incredible fact that the condition of the working-classes throughout Massachusetts is a declining one, that the contrast between the relative positions of employer and employed is steadily becoming greater, that the number of men who emerge from the condition of workingmen is extremely small, and that the relations between employers and employed are becoming more and more hostile and defiant. ...when we read such things as these, we are introduced to a condition of affairs of which is far from generally known.⁴⁵⁵

As *The Nation* recognized, the bureau had uncovered a most disturbing truth: It appeared that the widespread belief that wage-labor was only a temporary stop for white men on the route to proprietary independence, social mobility and republican equality had become but a myth. In 1854, Abraham Lincoln could stand on the steps of Independence Hall and

⁴⁵³ *Cincinnati Gazette*, June 16th, 1871.

⁴⁵⁴ *Atlanta Constitution*, Jun 13th 1871.

⁴⁵⁵ "The Labor Question in Massachusetts," *The Nation*, June 8th, 1871.

declare that “there is no permanent class of hired laborers among us.”⁴⁵⁶ By 1870, the bureau’s statistics made such statements ring hollow.

That a statistical bureau calling for the end to wage-labor could gain such widespread support demonstrates how little the institution of wage-labor had become legitimized in the United States by the 1870s. A comparison of E.L. Godkin’s editorials in *The Nation* and Steward’s eight-hour day pamphlets in the years following the Civil War further exemplifies how broad the “free-labor” consensus that rejected the notion of a permanent wage-laboring class really was. According to the thoroughly middle class Godkin, wage laborers were being “steadily demoralized” as they became servants “subject to another man’s will.” The source of this subservience, Godkin noted, was that wage-labor created, as Godkin put it, a “disassociation of labor from capital” since most white American men no longer owned productive property or the profits of their labor.⁴⁵⁷ Steward’s working class argument was essentially the same, as he noted that “men no longer control their economic fate or daily lives” and how “the wages received under the present system, are not a *just* equivalent for our Labor.”⁴⁵⁸

Past historians have often missed just how vehemently anti-capitalist these post-bellum arguments were because they have conflated free labor and patriarchal-commercial principals – such as the admiration for individual initiative, private property and decentralized free markets - with an industrial capitalist ideology that rested on, among other key pillars, the inherent legitimacy and freedom of permanent waged labor. Despite

⁴⁵⁶ Abraham Lincoln, *Speeches & Letters of Abraham Lincoln, 1832-1865*. (New York: E. P. Dutton, 1907), 26.

⁴⁵⁷ E.L. Godkin, “Progress of the Working Class” in *North American Review*, 5 (1868): 106,152; Godkin, “Wages Against Co-operation,” in *The Nation*, Aug 8th 1867.

⁴⁵⁸ Steward, *The Eight Hour Movement*, p. 9, 19.

recognizing that most Americans in the 1860s rejected the notion of a permanent wage-laboring class, Eric Foner nevertheless referred to the patriarchal-commercial free labor ideology he so elegantly dissected as “capitalist,” mainly because it valued competitive commodity production and an individual, acquisitive nature. Much like Godkin and Steward’s arguments, however, the 1866 Massachusetts commission to investigate the “conditions and prospects of the industrial classes” serves as yet another good example as to why capitalist and commercial ideology were far from being one and the same and how a desire to acquire wealth through market exchange and productive labor did not necessarily translate into a “capitalist” worldview.⁴⁵⁹

Headed by Franklin Sanborn, who had founded the American Social Science Association a year before, the Massachusetts commission concluded that the government could not intervene in the contractual relations of wage-labor “without so far subverting the right of individual property and establishing communism.”⁴⁶⁰ This may seem like a classic capitalist argument, but then the commission went on to assert that “men should be the master, not the servant of his work” and through the “practice of economy” wage workers could “become their own capitalists” and once again “be masters of their own time and their own terms.”⁴⁶¹ Such a contrasting of wage-labor with self-mastery and personal freedom would never have appeared in an official state commission by the 1890s. Sanborn’s statements, therefore, demonstrate that even the fairly conservative members of the commission either rejected the tenets of a capitalist social system or believed that

⁴⁵⁹ Foner, *Free Soil*. See introduction, chapter two for differences between capitalism and commercialism.

⁴⁶⁰ Report of Commission on the Hours of Labor, House Document 98, Feb, 1866, p. 29.

⁴⁶¹ *Ibid*, 35, 49.

the larger public did. The notion that permanent wage-laborers could live a life of freedom and independence was, even to these refined men, unacceptable.

Godkin, Steward and the Sanborn commission's arguments once again prove, as we saw in previous chapters, that Americans viewed wage-labor as the *corruption* of their free market system, not its latest manifestation. In their opinion, when commodity producers lacked their own capital or productive property (be it land or tools) they lost their proprietary bargaining power and were forced to enter into dependent – and hence coercive - wage relations. Working for wages was no independent market exchange between self-interested “masters,” free to enter and exit into voluntary contractual relationships as they wished. In short, to postbellum Americans the very notion of a “labor market” sounded like an oxymoron.

For the rising manufacturing elite in New England, such a widespread rejection of a permanent wage laboring class was obviously dangerous. Having Midwestern periodicals or southern newspapers question the notion of industrial progress in Massachusetts was one thing. Hearing it from the most respected of New York publications such as *The Nation* was quite another. For Massachusetts' businessmen – especially those involved in textile manufacturing – this was unacceptable. Something had to be done. A review of *The Nation* reveals that something was done quite quickly: Hodgkins' editorial praising the bureau would be his last contribution to the magazine. Unsatisfied solely with this move, however, Bostonians also made sure to call in their own statistical cavalry. A harsh response to Hodgkins's article was sent to Godkin, the editor of *The Nation*, by the eminent Edward Atkinson, a well-known Bostonian cotton manufacturer, economic thinker and statistical expert on everything from tariff reform to cotton yields. Pointing to the “rapid increase in

savings banks deposits” as evidence that factory wages were high enough to allow operatives to accumulate wealth and one day open their own business, Atkinson insisted that the bureau’s arguments had “no foundation in fact.”⁴⁶²

Atkinson’s letter would come back to haunt him. For the third annual report by the bureau published in the spring of 1872 centered on none other than a statistical analysis of the Massachusetts savings banks. Taking a careful look at savings bank records, the bureau discovered that over fifty percent of the deposits made were for more than 300 dollars – a sum that clearly no wage-laborer could have attained. Aggregating these mysterious deposits together, the bureau calculated that one-seventh of the savings accounts held around half of the total wealth deposited in the banks. Not only had the bureau disproved Atkinson’s oft-heard argument regarding labor’s ability to save, it had created the first income inequality statistics in American history. To add insult to injury, the bureau accused Massachusetts capitalists of using the savings banks in order to evade taxes, since at that time savings deposits were taxed at a much lower rate than other forms of property.⁴⁶³

Again, Boston’s bourgeoisie moved fast. Before the report was even presented to the legislature, it was swiftly turned over to the state’s financial and banking committee for an investigation into the bureau’s statistical methods. Called into to testify at a closed hearing, the bureau chiefs were surprised to discover that a number of bankers had been placed on the commission. Following a quick investigation, the commission concluded that the

⁴⁶² Edward Atkinson, “The Condition of Labor in Massachusetts,” *The Nation*, June 22nd, 1871.

⁴⁶³ MBSL, *Third Annual Report*, 293-335; MBSL, *Fourth Annual Report*, 172, 228. As opposed to regular property taxes the rate of taxation on savings banks deposits was less than one percent. Leiby, *Carroll Wright*.

bureau's "inferences and conclusions...are based upon insufficient returns and data."⁴⁶⁴

Desperate to rid themselves of the bureau, Boston elites tried to pass a resolve that would abolish the bureau completely. With the *Advertiser* serving as their mouthpiece, they declared that when they had read the bureau chief's "unspeakably mischievous" report, they were "astonished at [his] audacity" and accused him of lending "himself at the outset to a false and indefensible theory of labor, which made it next to impossible for him to collect statistics except such as favored his theory."⁴⁶⁵

A majority in Massachusetts, however, was not only against the abolishment of the bureau but still tended to trust its statistical findings. The *Springfield Republican* wrote that "each successive year increases, perhaps we may say doubles the value" of the bureau's reports.⁴⁶⁶ The *Boston Commonwealth*, the paper of choice for small business men and the petit-bourgeois, defended the bureau from attack as well. Turning the tables on the *Advertiser's* questioning of the bureau's motives, the paper retorted that "capital...was objecting to investigation of its methods," since "the rich man hugs his money, and objects to change." In the end, even the banking committee's declaration regarding the unsubstantiated claims of the savings banks statistics was rejected by the state legislature.⁴⁶⁷

With the situation quickly spinning out of control, the time had come for the best of Boston's best men: Charles Francis Adams Jr. Fresh off his damning indictment of Jay

⁴⁶⁴ Qtd from a summary of the hearing that can be found in State Committee on Banking Papers, Massachusetts State Archives, Boston, MA.

⁴⁶⁵ *Boston Daily Advertiser*, April 29th, May 4th, 1872. The *Boston Daily Advertiser* covered the bureau somewhat obsessively. See also May 5th, 1871, April 29th, May 12th, 1873.

⁴⁶⁶ *Springfield Republican*, April 26th, 1872.

⁴⁶⁷ *Boston Commonwealth* quoted in from MBL, *Fourth Annual Report*, p. 27-9.

Gould's nefarious railroad schemes in *The Chapters of Erie*, Adams was undoubtedly the most admired reformer in the state.⁴⁶⁸ Furthermore, as chairman of the Massachusetts Railroad Commission he was viewed as an expert of statistical analysis. Devoting over ten pages to the bureau's third report in the elite *North American Review*, Adams charged the bureau with not deducing their conclusions solely from the statistics at hand. "We have facts of great interest and opinions of no value what so ever," snapped Adams, "tumbled together with disputed industrial theories, here advanced as settled facts, and garnished with specimens of the worst rhetoric."⁴⁶⁹ Unlike other Bostonian businessmen, however, Adams was against the abolishment of the bureau. Much like Atkinson and Godkin, Adams was an active leader in the newly-founded American Social Science Association, an organization which lamented the fact that statistics were not used more in legislation by civil servants as an "efficient," bureaucratic alternative to partisan politics.⁴⁷⁰

Thanks in large part to the harsh commentaries of Adams, Atkinson and the *Daily Advertiser*, the conflict over the bureau had transcended the realm of the legislature and become a cultural struggle over who had the social power to decide what was objective and what was not. Since the ballot box played no role in such battles, the bureau found itself at a distinct disadvantage. By claiming that statistics were wholly objective facts that could be

⁴⁶⁸ For two very different views of Charles Francis Adams Jr. compare Thomas McCraw, *Prophets of Regulation: Charles Francis Adams, Louis D Brandeis, James M. Landis, Alfred E. Kahn* (Cambridge, Belknap Press of Harvard University, 1984) and Nancy Cohen, *The Reconstruction of American Liberalism, 1865-1914* (Chapel Hill: University of North Carolina Press, 2002). For Adams' own writings on railroad corruption see *Chapters of Erie, and Other Essays* (New York, 1871).

⁴⁶⁹ Charles Francis Adams Jr., "Critical Notices: Third Annual Report of the Bureau of Statistics of Labor," *The North American Review*, 115 (1872): 210-220.

⁴⁷⁰ Henry Villard, "Introductory Note," in *Journal of Social Science*, 1 (1869): 5. Typical articles on the ability of statistics to reveal the natural laws of society include E.L. Godkin, "Legislation and Social Science," *Journal of Social Science*, 3, p. 115; Edward Atkinson, "The Inefficiency of Economic Legislation," *Journal of Social Science*, 4 (1871): 114. On the *American Social Science Association* see Haskell, *The Emergence of Professional Social Science* and Cohen, *Reconstruction of American Liberalism*.

severed from any political inclination or interest, liberal reformers such as Adams gained the upper hand by transforming the dispute over the bureau into a seemingly depoliticized affair of science and empiricism. With their journals of social science and Harvard diplomas, men like Charles Francis Adams Jr. had the institutional prestige, cultural clout and intellectual capital to convincingly undermine the work of the bureau. Naturally, the fact that men such as Adams and Atkinson were part of a social circle which included the richest and most powerful men in the state didn't hurt either.⁴⁷¹

Sure enough, less than a year later Adams and Atkinson got their wish as Massachusetts Governor relieved the bureau chiefs of their duties and appointed Carroll Wright, a former state senator who had voted numerous times against the ten-hour work day, as director of the Massachusetts Bureau of Labor Statistics. The fact that Wright had no background in statistics reflected how the academic infrastructure of social science was still not developed enough for the bureau to be placed in the hands of “experts.” Since the social sciences did not yet have great institutional authority, the apparent disinterestedness of the bureau’s chief became crucial. Francis Amasa Walker, the federal census bureau chief, head of the American Statistical Society, and a fellow Brahmin, understood this. After Wright’s appointment, Walker wrote to him with some words of advice. “I have strong hopes that you will so distinctly and decisively disconnect the Bureau from politics, from dependency on organization, whether of workingmen or employers.”⁴⁷² Limited by his lack of statistical knowledge, Wright transformed Walker’s advice into his *raison d’être*. In fact, he even printed Walker’s letter on the first page of his first bureau

⁴⁷¹ On the success of Gilded Age reform “experts” in depoliticizing economic debates see Cohen, *Reconstruction of American Liberalism*.

⁴⁷² MBSL, *Fifth Annual Report* (1873):1.

report. Constantly repeating the mantra of non-partisan objectivity with mottos such as “figures don’t lie and liars don’t figure,” Wright soon gained the respect and trust of both the economic elite and the public at large.⁴⁷³

In his first report in 1874, Wright focused mainly on calculating the cost of living and comparing wages in the United States to Europe, a comparison in which the American laborer fared rather well. Turning to the question of the eight hour day, Wright contended that the “hours of labor will take care of themselves.”⁴⁷⁴ By his second report, Wright had concluded that wage-labor was a legitimate economic system, and that “the iconoclasm that strives to break it down, will be devoid of fruitful results or permanent benefits.”⁴⁷⁵ As for the savings banks, Wright did look into the matter in his first report and discovered that the bureau’s original calculations had largely been on the mark. He never looked into savings banks again.⁴⁷⁶

Accounting for Carroll Wright

Wright would remain the head of the Massachusetts bureau until 1885, when he was appointed chief of the newly founded U.S. Bureau of Labor, beating out Knights of Labor leader Terrence Powderly for the highly coveted federal appointment. In 1894, the middle classes’ perception of Wright as the embodiment of non-partisanship led him to chair the commission which investigated the Pullman strike in Chicago.⁴⁷⁷ History has been

⁴⁷³ Leiby, *Carroll Wright and Labor Reform*, 76-142.

⁴⁷⁴ MBSL, Fifth Annual Report (1874): 334.

⁴⁷⁵ Ibid, Sixth Annual Report (1875): 447.

⁴⁷⁶ Pidgin, “History of the Bureau of Statistics of Labor of Massachusetts,” p. 78, 86, 89.

⁴⁷⁷ Charles Francis Gettemy, *The Massachusetts Bureau of Statistics, 1868-1915* (Boston: Wright and Potter) 1915; Leiby, *Carroll Wright*, 163-171.

kind to Carroll Wright as well. Today, Harvard's online collection of the Massachusetts bureau's reports explains that while the "pro-labor" founders of the bureau became "embroiled in controversy," Wright was determined to "make the new bureau an objective, scientific organization that was free of political bias."⁴⁷⁸ And while the founders of the bureau have been relegated to a historical footnote, Wright has widely been regarded as the father of labor statistics – and rightfully so. From productivity rates to cost-of-living statistics, it was Wright's statistical vision – not the bureau founders – that was reproduced and institutionalized first by the Aldrich report in the 1890s and then time and again with the rise of the liberal regulatory state in the early twentieth century.

To understand the ideological and political underpinnings of twentieth century labor statistics and economic indicators, therefore, we must take a closer look at Wright's statistical work. Perhaps the most striking characteristic of Wright's voluminous statistical reports was his knack for putting a positive spin on the most controversial social, economic or political questions of the day. Were male skilled laborers, as many workers of the era decried, being displaced and deskilled due to the rise of machines? No, Wright replied in two separate influential reports, machine production actually created more and better jobs. Were strikes useful in improving the condition of the worker? No, Wright's reports replied, strikes actually hurt workers. To prove this, Wright did not explore the earning gaps between employers and employees but simply calculated the amount of priced production that "society" had lost due to labor struggles.⁴⁷⁹

⁴⁷⁸ Harvard University's open collections program, "Women Working 1800-1930," <http://ocp.hul.harvard.edu/www/organizations-MBSL.html>.

⁴⁷⁹ On Carroll Wright's writings on the effects of machine production and the displacement of wage labor see United States Commissioner of Labor, *Hand and Machine Labor* (Washington, 1898) and *Work and Wages of Men, Women and Children* (Washington DC, 1896.) Leiby, *Carroll Wright*, 110, 136. On strikes see MSBL, 11th

Progress, Wright seemed to assume in all his reports, was not a question that needed to be examined statistically, but rather an inevitable trait of modern industrialization. The notion that life may not have been getting better for most Americans was absurd. Statistics enabled him to trace the linear ascent of progress. "History is statistics ever-advancing," he noted in one report, while "statistics is history standing still."⁴⁸⁰ Unsurprisingly, Wright's reports, as he himself noted, became a hit with the capitalist classes. "When the introduction to the report for 1875 was written," Wright would later reminisce, "the circumstances were entirely different from those existing today. Then the manufacturers of the State were, to a considerable extent, afraid of the bureau, and in some sense, inimical to it; today, they are, as a rule, friends."⁴⁸¹

It is not a coincidence, furthermore, that Wright ended up preparing the cost-of-living statistics for the Aldrich report in 1893. Following nearly two decades as the chief of state and national labor statistic bureaus, he had become the undisputed father of cost-of-living statistics as they came to stand at the center of nearly all of his statistical writings. A reading of these reports reveals how the indicators he used for measuring the "human condition" were slowly narrowing towards the singular cost-of-living statistic. In his first reports, Wright focused a great deal of energy on cost-of-living and productivity statistics but he also included data on schooling, sanitary conditions, the number of volumes in local libraries, literacy rates, hours of leisure, fallen women, female health, cooperatives, pauperism and crime, convict labor, and factory safety. By the 1880s, however, these

Annual Report (1880);61-69; United States Commissioner of Labor, Third Annual Report (1887): 9-28. Leiby, *Carroll Wright*, 154-6.

⁴⁸⁰ Carroll Wright, "The Value of Statistics," *The Popular Science Monthly*, 39 (1891): 445.

⁴⁸¹ MBSL, *Seventh Annual Report* (1876): xv.

“moral statistics” were appearing less and less in his reports. While his 468-page report in 1884 included 334 pages on wage and cost-of-living figures, for instance, it included only 133 pages on “the working girls of Boston.” While his 563-page report in 1885 included 61 pages on the “health statistics of female college graduates,” it included 367 pages on cost of living and wage comparisons.⁴⁸²

As these moral statistics faded away, Wright focused more and more of his time on cost-of-living statistics. Clearly, Wright felt that such figures should serve as the premier economic indicators of the day. “No comparison as to the prosperity of industrial communities can be just,” he argued, “that does not take into consideration the relative ease with which the workingmen in those communities may procure the means of subsistence, and the relative amount of comfort attainable for a given outlay of time and effort.”⁴⁸³ Much like the future Aldrich Report he would help shape, Wright did not challenge the institution of wage-labor, but rather embraced it. Unlike his predecessors at the Massachusetts Bureau, he did not use cost-of-living statistics to see if Americans were saving enough to escape wage-labor. On the contrary, since he viewed moderate consumer comfort earned from wage work as the main goal of American society, cost-of-living statistics went from being a means to a producerist, republican end to an end in itself. The ideological and moral principles which undergirded these cost of living statistics were no longer producerist goals of social mobility, equality or proprietary independence, but rather consumerist goals of “comfort” and “subsistence.” Cost-of-living figures were also useful in supplying his reports with a rosy hue during the painfully difficult years which

⁴⁸² For Wright’s use of “moral statistics” see MBSL, *Fifth Annual Report* (1874) ch. 3; MBSL, *Sixth Annual Report*, ch. 1, 2, 5; MBSL, *Eighth Annual Report* (1877) ch. 2, 4, 5. MBSL, *Ninth Annual Report* (1879) ch. 2, 5.

⁴⁸³ MBSL, *15th Annual Report* (1884): 438.

followed the panic of 1873: By measuring workers' prosperity mostly through the lens of cost-of-living statistics, for instance, Wright's data often painted a picture in which the condition of the laborer was improving, even though his wages were rapidly falling, because the cost of goods was dropping even faster.

The underlying message from Wright's cost-of-living figures, and the main conclusion of the future Aldrich report, was this: While wage laborers no longer had much of a chance to gain proprietary independence, and while the deskilling of labor might have led to greater inequality among capital and labor, none of this was of particular social consequence since a worker's wages still bought, thanks to the wonders of mechanization, corporate consolidation, and economies of scale, far more food, clothing or consumer goods than ever before.⁴⁸⁴ Cost-of-living statistics, in short, were politically useful to Wright because they did not focus on distributive issues between labor and capital nor did they explore questions of proprietary independence, inequality, social mobility or power in the workplace. Shifting the emphasis from producerist values to consumerist ones, cost-of-living figures created a statistical logic in which the more goods a society churned out the better things looked for workers since the price of these goods would go down and therefore workers could consume more of them (even in cases in which wages declined slightly as well). Such figures, therefore, legitimized not only permanent wage labor but giant, vertically integrated corporations in which economies of scale and deskilled labor processes allowed for enormous productivity gains that jettisoned petty producers out of the market. While the early Massachusetts bureau's producerist statistics on proprietary independence or equal income distribution would have made such corporate consolidation

⁴⁸⁴ MBSL, Eight Annual Report (1877): 87.

look like a nightmare, consumerist cost-of-living figures made it look like paradise as wage-workers could suddenly enjoy more and more fruits of industrial progress.

Perhaps the best way to summarize Wright's worldview is through a final example from his work. In the early 1880s, Wright organized an annual conference for all the commissioners of the state bureaus of labor statistics in the country (as we shall see, by then there were quite a few.) In 1884, he decided that these commissioners should all go on a joint field excursion to the new Pullman town outside of Chicago. While visiting Pullman, the commissioners of the different statistical bureaus were hosted by Duane Doty, the town's official statistician who kept very detailed reports on everything that went on in the town, from labor consumption to rent payments to labor productivity. After this visit, Wright wrote a glowing report on Pullman's town, praising it as the model for a new America. He especially appreciated the detailed statistical analyses that Doty had collected in order to run the town as smoothly as they ran their factory. Not once did Wright bother to note the clearly authoritarian nature of the town, nor did he mention the great profits Pullman was accumulating. As with his entire body of statistical work, questions of power, labor independence, inequality and coercion were never addressed, as his statistical gaze was firmly set solely towards issues of stability, productivity and consumer comfort.⁴⁸⁵

David Wells' Annual Reports and the Birth of Cost-of-Living Figures

Examining some of the political reasons Wright enthusiastically adopted cost-of-living figures still leaves a central question unanswered: Where did these cost-of-living statistics, which by the 1892 Aldrich report would come to serve as the central indicator for measuring the American "human condition," come from? What was their history? That

⁴⁸⁵ For Wright's favorable report on Pullman Town see MBSL, *Sixteenth Annual Report* (1885): 3-26.

story begins in the late 1860s in Washington DC. Just as the initial founders of the Massachusetts bureau of labor statistics were sitting down to write their first statistical report, a young economist by the name of David Wells was about to do the same, although in a very different manner. In the late 1860s, David Ames Wells was one of the most important political figures in America, thanks to being hired as Special Commissioner of the Revenue in one of the last political moves of Abraham Lincoln's life. Each year, Wells issued an influential report whose goal it was to describe the main trends in the American economy, mostly through the use of statistical data. At his disposal was a new institution, the Bureau of Statistics in the Treasury department, which helped him collect the statistics he required. Such institutional support was unprecedented in the history of the American state. While the Treasury Department did generate some reports in antebellum years, such data was collected in an ad-hoc manner and the reports were not widely read. On the contrary, Wells reports quickly became annual events designed to give his reader a firm grasp of all elements of American economic life, including agriculture, the money supply, bank capital, industrial output, the public debt and more. During the years in which they were published, the reports became the fulcrum of many political debates, as his figures were constantly used to either legitimize or criticize various economic policy proposals.⁴⁸⁶

Due to the broad sweep of Wells' brush, it is perhaps surprising to discover that the central issue he returned to time and again in his reports was the cost of living in America. In his final report from 1869, for example, he wrote:

⁴⁸⁶ For a blow-by-blow account of Wells' work at as Commissioner of Revenue as well as the many political controversies which surrounded it see Herbert Ferleger, "David A. Wells and the American Revenue System," (PhD. Diss., Columbia University, 1942).

While as a nation we possess the greatest area of fertile and cheap land, unrivalled means of intercommunication, and the freest and most popular form of government, domestic production, as measured in price, is nevertheless carried on and maintained on terms of less advantage to the consumer than is the case in any other kindred and competing nation.⁴⁸⁷

Wells consistently noted that the biggest problem in America was that the prices of consumer goods were too high. While Wells gave a number of reasons for these high prices such as paper money, tariffs, and high taxes, the first cause he listed was the problem of the country's labor force. Lamenting the "greatly increased cost of nearly all forms of labor," Wells believed that American laborers earned too much money for too little work. "The universal testimony of manufacturers," he noted with concern in his first report, "is that the operatives who entered the army from their establishments have not, as a general thing, returned to their old employments." While Wells briefly noted that this was partly because they were dead, he gave other explanations for this troubling development as well:

Some have engaged in the cultivation of cotton, and in various other industrial pursuits in the south; a much larger percentage have sought new homes and new employments at the extreme west, or on the Pacific coast; while others, taking advantage of the capital made available to them through the payment of bounties and previous savings, have become principals rather than subordinates in business.⁴⁸⁸

To most Americans, Wells' laments must have sounded quite odd. Instead of celebrating the fact that a greater majority of people were finding self-employment and proprietary independence, Wells was upset by it. While Horace Greeley famously told the young, American laborer who managed to survive the Civil War to "Go West!," Wells very much preferred that he head to the nearest factory. In the next paragraph, he made his disdain for labor's independence even more evident. "During the summer of 1866," he

⁴⁸⁷ *Report of the Special Commissioner of the Revenue*, 3rd Annual report (1869), 10-11.

⁴⁸⁸ *Report of the Special Commissioner of the Revenue*, 1st Annual report (1867), 22.

bemoaned, “the product of the cotton mills of New England was variously reduced from five to twenty five per cent through the inability to obtain female operatives, even with the inducement of the highest rates of wages ever paid in this branch of manufacture.”⁴⁸⁹

According to Wells, this “independence of labor over capital” had dire ramifications. Comparing the entire nation to a capitalized investment, Wells lamented how “the accumulation of new capital in the United States...is at a much slower rate than it ought to be.” For capital to accumulate at faster rates, Wells argued that besides tax reform and tariff removals, the government needed to find ways to help employers cut wages without sacrificing America's overall market output. To cut labor costs and increase productivity, however, Wells needed to know what exactly made up labor costs. He needed to know the cost of living in America. This led him into the home of the American worker. In one report, he estimated the cost of living by using data from a French-Canadian boardinghouse of factory operatives in New England. Noting that these families were “frugal and simple,” Wells illustrated that the “average consumption of butter amount[ed] to about \$16.51 a year for each person, including women and children.” He then did the same for milk, eggs, and cheese while adding a full appendix on “the quantity and cost of food and other necessities of life consumed in the New England factory boarding house.” Concluding his remarks, Wells proudly noted how “no similar investigation, as respects accuracy, has ever before been instituted in the United States.” Wells was right. Such detailed cost-of-living statistics had never before collected before.⁴⁹⁰

⁴⁸⁹ Ibid, 22.

⁴⁹⁰ *Report of the Special Commissioner of the Revenue*, 3rd Annual report (1869) 31.

What was Wells doing? Why did a report on the economic condition of the American people contain a detailed statistical analysis on the cost of butter or the amount of cheese consumed by French Canadian factory workers in a New England boardinghouse? Had John Edgar Thomson, Daniel McCallum or Thomas Scott, the heroes of Alfred Chandler's *The Visible Hand*, examined the report they would have likely recognized that Wells was doing cost-accounting. Only unlike the Pennsylvania Railroad, this cost-accounting was not on the level of the firm but on the level of society. The main idea, however, remained very much the same: Just as a corporation sought to lower the price of inputs that went into a factory's production process, Wells hoped that he could lower the price of inputs that went into people in the form of food, clothing and housing.

Wells focus on cost of living statistics and labor productivity did not, however, emerge from his personal experiences in manufacturing, of which he had none. Nevertheless, the factory floor, capital-labor relations and managerial cost accounting had no doubt shaped Wells views – and statistics. As Wells' personal correspondences in the late 1860s clearly demonstrate, the cost-of-living statistics he cited, and the economic vision which animated them, were coming from one very specific source: Boston textile manufacturer Edward Atkinson. The key to understanding the rise of cost-of-living statistics lies, therefore, less in the mind of bureaucrat David Wells – or Carroll Wright for that matter - and far more so in the mind of Edward Atkinson. It is here, in the actions of a man who worked tirelessly to link the interests of New England textile mills to the emerging government bureaus of statistics, that the strong connection between cost-accounting figures and cost-of-living statistics becomes both obvious and profound.

The Ubiquitous Edward Atkinson

Edward Atkinson was first and foremost a cotton manufacturer, a manager, an accountant and a capitalist. Born and bred in Brookline, Massachusetts, he became treasurer of the Ogden textile mills in 1851 and within a few years he was managing six mills from Maine to Rhode Island including the Lincoln, Cohoes, Kennebec and Indian Orchard. In his correspondence with factory owners, it is clear that Atkinson was running the show: He oversaw all the books, including payroll; he calculated profits and determined dividends for the stockholders; he made the decision if a mill should be shut down if expenses were too high; he bought the raw cotton from the south; he decided how many spindles each factory should construct. In his role as mill manager, Atkinson quickly became infatuated with cost-cutting. When he was hired to manage a mill in 1858, for instance, he immediately requested that reports on costs be sent to him monthly instead of semi-annually, as had been done prior. Over the years, Atkinson expressed a particularly keen interest in labor costs, and carefully examined the payrolls of all his mills. In 1861, he even wrote a best-selling book titled *Cheap Cotton and Free Labor*, which argued that slavery should end because the labor costs of growing cotton would be reduced under a regime of wage labor.⁴⁹¹

As a textile mill manager, Atkinson not only ran factories but essentially small towns. In this era in New England, many workers, be they local girls from the countryside or immigrants from Ireland, often ate in boardinghouses or slept in tenements owned by

⁴⁹¹ For a sample of Edward Atkinson's work as a treasurer see Atkinson to Hutchins, Sept 5th 1857; Atkinson to Jenkins, Sept 21st 1857, Atkinson Papers, Massachusetts Historical Society; For examples of his use of cost accounting see Atkinson to Brown, Feb 17th, Feb 22nd 1858, Atkinson Papers; For examples of his penchant for profit maximization see Atkinson to Benjamin Sanders, Nov 20th 1858, Atkinson Papers. For his interest in lowering labor costs, see for example letter to Clegg, on April 20th 1858, Atkinson Papers in which he hatches a plan to put fugitive slaves to work in his factories. On his argument against slavery see *Cheap Cotton and Free Labor* (Boston, 1861).

the textile factory. Atkinson, therefore, also oversaw the construction of operative tenements near the mills and kept a running interest in how much food his workers ate. These aspects of the company were treated to the same profit-maximizing economic analysis as factory operations. When Wells, for instance, asked Atkinson if he was willing to help employees purchase their own homes, he replied that “I do not believe in philanthropy toward the able-bodied that does not pay six percent.”⁴⁹²

But while Atkinson always had cotton manufacturing on his mind, he was also a one-man political juggernaut. As illustrated by the stunning breadth of his personal papers, which spans 78 volumes and 50,000 pages, while Atkinson never officially entered politics he was, without a doubt, one of the most powerful political forces in America for nearly a half century. Publishing an amazing 291 pamphlets, articles and books in his lifetime and corresponding at a dizzying rate with the most powerful men in the country, from businessmen John Murray Forbes and Andrew Carnegie to Presidents Grover Cleveland, William McKinley and James A. Garfield, Edward Atkinson was – as historian James Livingston has eloquently put it – a “ubiquitous” presence in the most important political disputes of the era, be it money and tariff reform, the labor question or foreign policy.⁴⁹³

Atkinson was especially adept at transforming impressionable men in key political positions into agents of his own interest. His voluminous correspondence with David Wells is a textbook case. In 1865, Wells had been hired by Lincoln to write but one revenue report. It was Atkinson who helped make the job permanent. After securing the position for Wells, Atkinson began to use him as his political eyes and ears in Washington, requesting

⁴⁹² Atkinson to Wells, October 12th 1875.

⁴⁹³ James Livingston, *The Origins of the Federal Reserve: Money, Class and Corporate Capitalism: 1890-1913* (Ithaca: Cornell University Press, 1990).

that he dig up information on bills that had yet to be made public or influence the latest tariff laws that were in the works. Wells became very dependent on Atkinson, constantly asking for his help and advice. As a result, Atkinson's influence on Wells' statistical reports was vast. While Wells had arrived in Washington as an ardent supporter of high tariffs, Atkinson soon convinced him that the biggest problem in America was high labor prices. Lower tariffs and free trade, Atkinson explained to Wells, would reduce the cost of basic consumer goods and therefore labor's wages. As his long correspondence with Wells reveals, Atkinson's concern with high labor prices was clearly a product of his own cost-cutting concerns. In a letter written to Wells as the latter was preparing to write his first report, Atkinson hammered his main points home:

In consequence of the forced division of labor into unnatural channels and the withdraw of labor into the army, labor advanced and has become too independent. The wages of a large portion of the labor the country are now unnaturally high and the laborer do not do a full day work. The prices of commodities, of all material and manufacturers are therefore unnaturally high yet they may pay no profit and in many cases a loss.⁴⁹⁴

If the line on the independence of labor sounds familiar, that is because Wells used the very same expression in his final report. Atkinson wasn't only feeding Wells lines but statistics as well. It is no coincidence that the cost of living statistics Wells used in his revenue reports were based on French Canadian immigrants working at a textile mill. Atkinson had supplied him with these figures just as he had supplied him with much of the statistical information on labor that found its way into Wells' reports. Wary of showing the

⁴⁹⁴ Atkinson to Wells, April 11th 1866, Atkinson Papers. For the masterful way in which Atkinson "turned" Wells, see for instance his letters to Wells on Nov 21st 1866, January 9th 1867, February 6th 1867, Atkinson Papers. Other historians have also recognized that Atkinson was responsible for Wells intellectual shift. See, for instance, Daniel Horowitz, "Genteel Observers: New England Economic Writers and Industrialization," *New England Quarterly* 48 (Mar. 1975): 65-83

clear linkage between these statistics and his own manufacturing interests, however, Atkinson requested that the name of the mills be left out of the final report.⁴⁹⁵

A look at Atkinson's own writings in the 1860s reveals why he had turned his attention towards cost-of-living statistics. "In England the rate of wages is nominally much lower," Atkinson explained in one article, "but a suit of strong fustian clothing can be purchased for one pound or five dollars. Beer costs three half-pence a glass, or three cents. Meat is not higher than in this country, and house rent is less; and, notwithstanding our great natural advantages, skilled laborers are said to be rapidly returning to their homes in Europe."⁴⁹⁶ While nearly every American commentator of the era used England as a euphemism for pauperism and poverty, Atkinson believed England should serve as a model for the United States. Using cost-of-living figures, he argued that the situation of skilled laborers in England was actually better than in America, because in England things were being produced more cheaply.

Atkinson's initial move to use cost-of-living statistics to cut labor costs on a national scale, mostly through tariff reform, failed. In 1870 David Wells was unceremoniously dismissed from his position as revenue commissioner after it had become clear to tariff-loving Republicans that he had shifted his allegiances from protectionism to free trade. This initial blow to Atkinson's policy goals, however, was tempered a few years later by the panic of 1873, which led to massive unemployment and, as Atkinson excitedly remarked to Wells in 1875, "an excess of laborers willing to work at low wages."⁴⁹⁷ Only in the

⁴⁹⁵ Atkinson to Wells, Nov 21st 1855, Atkinson Papers.

⁴⁹⁶ Edward Atkinson, *On the Collection of Revenue* (Boston, 1867) 10.

⁴⁹⁷ Atkinson to Wells, undated, 1875, Atkinson Papers.

deflationary 1880s, when the Knights of Labor were beginning to gain national attention, did Atkinson once again turn to cost-of-living figures. “The reduction in the cost of living,” he complained to anyone willing to listen, “was greater than the reduction in wages.” As a result, Atkinson grimly concluded, “the capitalist sees less and less proportion of the product and the laborer gains steadily.” This time, however, Atkinson looked not to Wells, who no longer had any political power, but rather to Carroll Wright, the well-respected head of the Massachusetts Bureau of Labor Statistics who would soon be hired as the Commissioner of the newly established Department of Labor. In so doing, Atkinson took the next crucial step in a political process that would lead, a decade later, to the writing of the Aldrich report and the meteoric rise of cost-of-living statistics.⁴⁹⁸

Trimming the Fat

In the fall of 1884, Edward Atkinson gave a talk in front of American Social Science Association titled “What Makes the Rate of Wages?” “The true cost of any given article is the quantity of labor or the human effort expended in its production,” Atkinson argued in front of his esteemed audience, articulating the conventional wisdoms of classical economics that still ruled America in the early 1880s. In the following sentence, however, Atkinson took the tenets of classical economics to a place few Americans had dared to venture. “Now, if we consider a human being as an automatic machine, similar to any other mechanical power or force,” he argued, “the true cost [of any given article] is the quantity of food and fuel expended in the conversion of a given amount of material substance into human force.”⁴⁹⁹ Treating people like one of his textile machines, Atkinson assumed that the cost of

⁴⁹⁸; Atkinson to Borden, June 6th 1885, Atkinson Papers.

⁴⁹⁹ Atkinson’s talk was later published in his book *The Distribution of Products* (Boston, 1885) 59.

human labor, like the cost of his spindles, was determined not by what the machine produced but rather by what it cost to keep the machine producing. The fact that this particular machine happened to be human mattered little to Atkinson's statistical analysis.

Treating people like machines and their lives as an ongoing process of capitalist production, Atkinson then did what he did best: He turned to cost-accounting, which in this instance amounted to cost-of-living. After spending the summer of 1885 sending out numerous requests to various manufacturers for statistics on the amount and cost of food their laborers consumed, Atkinson finally hit the jackpot when the Maryland textile mill Hooper and Sons sent him the figures below regarding the consumption and cost of food. Atkinson was ecstatic, noting that it was "difficult to obtain a detailed statement of the real cost of subsisting working people until you gave me this extremely valuable one. It will be the nucleus for a great deal of work in all the bureaus of statistics."⁵⁰⁰

⁵⁰⁰ Atkinson to Hooper and Sons, June 18th 1885, Atkinson Papers.

GROCERIES.		AVERAGE PRICE.	
Sugar	2,291 lbs.	\$0.07 ³ / ₁₀₀	\$168.74
Syrup	69 ³ / ₁₀ gals.	.30	20.79
Teas	91 lbs.	.43	39.13
Coffee	540 "	.12 ¹ / ₈	67.50
Yeast Powder . .	116 bottles	.12	13.92
Candles	32 lbs.	.12	3.84
Soap	1,074 "	.07	75.18
Soda (bicarbonate and washing)	116 ³ / ₈ "	.01 ¹ / ₈	1.75
Allspice and Cloves	1 "	.28	.28
Nutmeg	1 "	1.00	1.00
Mace . . . .			.15
Ginger	2 lbs.	.12 ¹ / ₈	.25
Pepper	15 ¹ / ₄ "	.17 ¹ / ₈	2.67
Mustard	14 ¹ / ₈ "	.25	3.70
Cinnamon	1 ¹ / ₈ "	.34	.10
Flavoring Extracts .	12 bottles.	.12 ¹ / ₈	1.50

Figure 16: Atkinson's cost of living statistics. A statistical table created by Edward Atkinson which calculates the cost of keeping laborers alive and productive. Atkinson, *The Distribution of Products*, 159.

As this quote suggests, by 1885 Atkinson had already worked his charm on the bureaus of labor statistics, especially Massachusetts chief Carroll D. Wright. A few months prior he had written a letter to Wright about his failed attempts to gather information on food costs, explaining the "great difficulty for an unofficial person to explore the subject."⁵⁰¹ Sure enough, the seventeenth report of the Massachusetts Bureau of Labor Statistics published a year later included a long, statistically detailed section on the cost and efficiency of working class food consumption. As we can see below the bureau's statistics looked a lot like the statistics Atkinson had begun collecting on his own. With generous government funding and a fairly large workforce of data miners at its disposal, however, Wright's bureau succeeded in generating dozens of "dietary schedules" from factory boardinghouses in Lowell, Lynn and Lawrence as well as detailed data on the cost of living in working class families from East Cambridge and Boston. Atkinson was proud that he had managed to shape the bureau's inquiries and often bragged about his ability to influence

⁵⁰¹ Atkinson to Wright, Dec 13th, 1884, Atkinson Papers.

statistical bureaus. "I have prepared the interrogations for all the bureaus of statistics and for Carroll Wright," he noted in one correspondence. "Carroll Wright will adopt my formula," he noted in another, showing optimism "that bureaus of statistics in thirteen states" would soon follow suit as well.⁵⁰²

DIETARY NUMBER, A 1.						
<i>Description:</i> Boarding-house in Lowell, Mass., of 77 persons, 66 males and 11 females. Boarders, mill operatives. Time, one month. Estimated as equivalent in demands for nutrients to 75 laboring men at moderate work for 30 days, or 1 man for 2,250 days.						
ANALYSIS.						
FOOD-MATERIALS.				NUTRIENTS.		
Kinds.	Prices per lb.	Quantities.	Costs.	Protein.	Fats.	Carbohydrates.
	cents.	lbs.		lbs.	lbs.	lbs.
Beef, roast,	10	400	\$40 00	60.4	79.9	-
Beef steak,	14	272	38 08	39.4	42.4	-
Beef, corned,	7	350	24 50	40.3	99.8	-
Beef tongue,	10	62	6 20	9.2	9.5	-
Beef stew,	5	167	8 35	23.4	52.3	-
Beef, tripe,	6	20	1 20	4.2	0.2	-
Pork, roast,	10	150	15 00	17.1	54.3	-
Ham,	11	160	17 60	23.4	54.9	-
Salt pork,	10	70	7 00	2.0	53.6	-
Lard,	8	260	20 80	-	257.4	-
Haddock,	7	168	11 76	13.9	0.2	-
Halibut,	12	50	6 00	7 6	2.1	-
Mackerel,	3	40	1 20	4.0	1.6	-
Salt fish (cod),	4½	50	2 25	8.0	0.2	-
Total meats, fish, etc.,		2,219	\$199 04	252.9	708.4	-
Milk,	2	3,024	\$60 48	102.8	111.9	145.2
Cheese,	11	63.5	6 98	17.2	22.5	1.5
Butter,	22 and 10	291	54 64	2.9	254.6	1.5
Eggs,	14	107	14 82	12.4	10.9	0.6
Total dairy products and eggs,		3,485.5	\$136 82	135.3	399.9	148.8

Figure 17: Massachusetts Bureau's dietary schedule. Note the resemblances between this cost-of-living table and the one Atkinson made privately a year prior (fig. 16). MBSL, 17th report, 249.

As can be seen in the bureau's statistical tables, however, a novel aspect had been added to Atkinson's original statistics on the cost and quantity of food consumed by workingmen and women. The reader now received a comprehensive breakdown of how much proteins, carbohydrates and fat laborers consumed for each cent of food they ate.

⁵⁰² Atkinson to Putnam, June 13th 1885; Atkinson to Atwater, May 23, 1885, Atkinson Papers. For the report on the food consumption see the MBSL, 17th Annual Report, 1886.

Charting the cost of food was not precise enough, the report explained, and “the relative cheapness or dearness of different foods must be judged by comparing not the prices per per pound but the costs of the actual nutrients.”⁵⁰³ Atkinson was the architect behind this statistical innovation as well. In May of 1885, as he was reaching out to Carroll Wright, Atkinson also wrote a letter to Wilbur Olin Atwater, a chemistry professor at Wesleyan University interested in questions of human nutrition and metabolism. “You have entered upon an inquiry as to the necessary elements of food...from the stand point of the naturalist or biologist,” Atkinson wrote. “I have been investigating the whole subject as an economist and there is an extraordinary dearth of accurate information.”⁵⁰⁴ Atkinson suggested that the he and Atwater work together, along with Carroll Wright, to create nutritional cost statistics. Atwater enthusiastically agreed.

This was the beginning of a beautiful friendship as Atwater and Atkinson would go on to collaborate on numerous projects regarding the minimum amount of nutritional energy people needed to be productive workers. While it is unclear who wrote the actual food consumption report for the Massachusetts Bureau that year, it clearly had Atkinson’s fingerprints - along with Atwater’s nutritional expertise - all over it. The report began by framing nutritional cost accounting as a project that would mostly help the laboring classes. “It is undeniably true,” the report noted, “that much money is wasted in the purchase of food which is lacking in the elements of nutrition, and that the income of the working classes might be made far more effective if it were expended in accordance with

⁵⁰³ MBSL, *17th report*, 249.

⁵⁰⁴ Atkinson to Atwater, April 23rd, 1885, Atkinson Papers. For Atwater’s approval of Atkinson’s plans see Atwater to Atkinson, May 8th, June 23rd 1885, Atkinson Papers.

the results of scientific research.”⁵⁰⁵ As the report continued, however, the actual reasoning behind the collection of cost-of-living statistics became abundantly clear. Either directly through their boardinghouse expenses, or indirectly through their generously high wages, manufacturers were feeding their workers too much food, and in an inefficient manner. Workers could make do with far less, the report argued. And since food expenses made up 50 to 60 percent of the worker’s annual expenditures, a sharp reduction in food costs meant a sharp reduction in labor costs. While the report never said so specifically, it did not take a mind-reader to see where the argument was heading: Cutting food costs would allow industrialists to cut wages. Atkinson made his true intentions perfectly clear in his personal correspondence, writing to Atwater, for instance, that the “rate of wages depends on the adequacy of the food supply.”⁵⁰⁶

In the bureau report, examples of laborer’s inefficient gluttony were frequent. “The French Canadian laboring man whose food we have examined,” the report noted, “consumes at home three and one-half pounds (including milk) per day. But when he comes to Massachusetts and works in a factory...he consumes five pounds.”⁵⁰⁷ The report also noted “the excessive quantities of fat in the American dietaries” and gave an estimate for the “minimum quantity of protein [that] is requisite for healthful nourishment.” Towards the end, the report made some pragmatic suggestions regarding how “dietaries could be so altered as to make them at once less expensive, equally wholesome and

⁵⁰⁵ MBSL, 17th report, 247.

⁵⁰⁶ Atkinson cited in Atwater to Atkinson, Nov. 6th 1886, Atkinson Papers.

⁵⁰⁷ MBSL, 17th report, 311

palatable, and much more healthful." Clearly directed at manufacturers' boarding houses, the report recommended serving less meat and more vegetables.⁵⁰⁸

Atkinson and Atwater's foray into nutritional cost accounting did not end here. In 1888, Atkinson requested that Atwater come up with a suggested ration of food that manufacturers could use when feeding their workers. While the 1885 bureau report found that workers spent roughly 25 cents a day or \$1.50 a week on food, Atkinson urged Atwater to come up with an equally nutritious formula that would cost only a dollar a week. Atkinson also sought to reduce the cost of living for workers, and earn some money on the side while doing so, by mass-producing his patented "Aladdin Oven," whose name had been chosen due to its supposedly magical ability to preserve fuel by heating food more efficiently thanks to a kerosene lamp that was placed in the middle of an cast-iron stove (see Atkinson's drawing below.) In *The Science of Nutrition*, a book which Atkinson wrote in 1896, he proudly noted how, thanks to the magic of the Aladdin Oven, he had managed to serve several friends at his whist club a seven-course dinner with a fuel cost of just 13 cents a serving, which was less than the cost of the after-dinner cigars. With his own obsession for cost-cutting, it comes as little surprise that Andrew Carnegie, who had begun to correspond frequently with Atkinson in the 1890, decided to purchase 3,500 copies of Atkinson's book in order to donate them to every major library in the country.⁵⁰⁹

⁵⁰⁸ Ibid, 317, 325.

⁵⁰⁹ Carnegie to Atkinson, 1896, Atkinson Papers; Edward Atkinson, *The Science of Nutrition* (Boston, 1886) 30. On the Aladdin Oven see Edward Kirkland, "Scientific Eating: New Englanders Prepare and Promote a Reform," *Proceedings of the Massachusetts Historical Society*, 86 (1974): 28-52; Harvey Levenstein, "The New England Kitchen and the Origins of Modern American Eating Habits," *American Quarterly*, 32 (1980): 369-86.

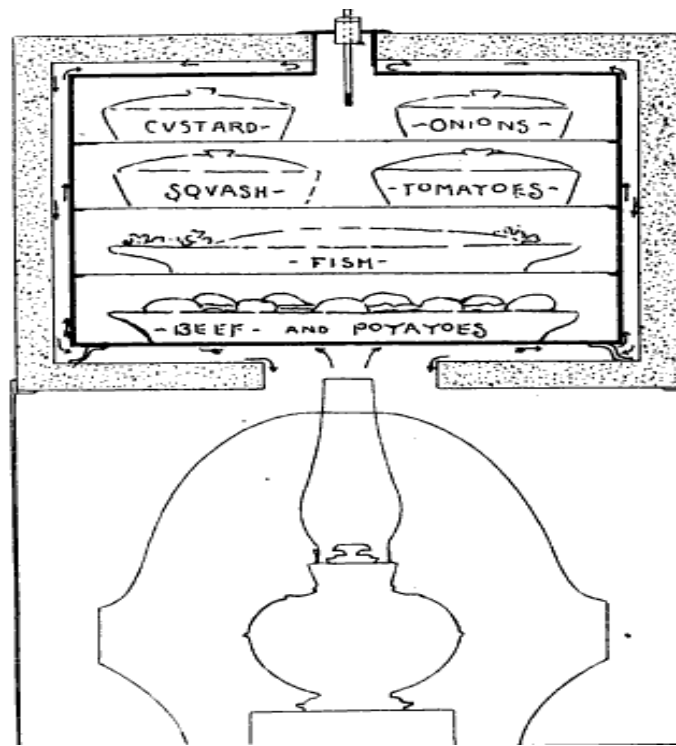


Figure 18: The Aladdin Oven. A drawing of the Aladdin Oven by Edward Atkinson. Note the "magic lamp" located beneath the food. Atkinson, *Science of Nutrition*, 247.

Atwater ended up becoming world famous as the father of the modern calorie largely due to Atkinson's intellectual inspiration and political connections. While the idea of the calorie had been floating around in Europe for some time, it was Atwater, following Atkinson's persistent urgings, who transformed it into a quantifiable unit of measurement. Thanks to some generous funding from the Department of Agriculture that Atkinson had managed to attain, Atwater was able to construct the world's first respiration calorie-meter in 1896. As the newspapers of the day described, the respirator was an airtight chamber "about as large as an ordinary's convict's cell" whose interior was visible through a triple-paned glass window. Previously used to measure the combustive efficiency of an engine, this newly designed chamber was designed not for machines but for men. Once a person was placed inside, all of his inputs and outputs could be registered through a barrage of

instruments that measured the amount of food he ate and the amount of excrements he passed. The first subject who entered the chamber was the school janitor, who was asked to lift dumbbells while thermometers measured the rise and fall of temperature within the house of glass. From the beginning it was clear that the calorimeter was designed for a very certain class of men.⁵¹⁰

In the 1890s, Atkinson's dietaries schedules spread like wildfire through middle class reform organizations. The Hull House settlement, the New York Association for the Improvement of the Condition of the Poor, the Industrial Christian Alliance and even the Tuskegee Institute replicated Atkinson, Wright and Atwater's studies.⁵¹¹ Not everyone, however, was pleased with this new fad. "As labor will be forced to a new level," the *Philadelphia Inquirer* decried, "we are to have chemical apparatus and half-weight scales and frugal diets, and dyspeptic inspectors travelling around and telling us that we eat too much."⁵¹² Eugene Debs wrote a personal letter to Atkinson denouncing these studies as "scientific degradation" that would reduce the American worker's labor to "a cost as low as Chinamen are subjected to."⁵¹³ A Boston labor leader argued that the savings would go to the employers profit not the workman's wages.⁵¹⁴

When approached by census marshals, bureau workers or missionaries, many workers refused to answer the questions. A wife of a Pittsburgh artisan who had refused to

⁵¹⁰ On Atwater's Calorimeter see Nick Cullather, "The Foreign Policy of the Calorie, *American Historical Review*, 112 (2007):337-364. Harvey Levenstein, *The Transformation of the American Diet*, 73.

⁵¹¹ Naomi Aronson, "Nutrition as a Social Problem," *Social Problems*, 29.5 (June, 1982).

⁵¹² *Philadelphia Inquirer* quoted in Aronson, "Nutrition as a Social Problem."

⁵¹³ Eugene Debs to Edward Atkinson, May 4, 1892.

⁵¹⁴ EM Chamberlin, "Reply to Edward Atkinson," in Atkinson, *The Margins of Profits* (Boston, 1887), 58.

say how much food her family bought and ate explained that “the neighbors were convinced that it was a scheme to see how much it actually cost for a man to live, in order that his wages might be reduced.” Other workers at boardinghouses purposely stuffed themselves with twice as much food on the day that the inspector had come to measure their cost-of-living. If they couldn’t influence the labor statistics the state bureaus had chosen to collect, they could still manipulate them.⁵¹⁵

The Knights of Labor and What Might Have Been

The battle over the Massachusetts bureau was perhaps the most prominent struggle over the power to shape government labor statistics, but it was hardly atypical. Beginning in the 1870s and continuing into the 1880s, over twenty states founded bureaus of labor statistics. Many of these bureaus, like those which emerged in the industrializing states of Ohio, Illinois, Connecticut, Pennsylvania and Maryland, were initially controlled - either directly or indirectly - by union activists or skilled labor organizations. The Ohio bureau, for instance, was pushed through the state legislature by the president of the Coopers’ International Union as well as the President of the National Association of Mechanical Engineers. The Philadelphia Board of Trade complained how the Pennsylvania Bureau of Labor Statistics was “communistic.” What is more, many of the western labor bureaus - such as those in Missouri, Kansas, Iowa and California, had strong ties to the agrarian populist movement.⁵¹⁶

⁵¹⁵ Aronson, “Nutrition as a Social Problem.”

⁵¹⁶ For state bureaus of labor statistics see also William Block, *Investigation and Responsibility: Public Responsibility in the United States, 1865-1900* (Cambridge: Cambridge University Press, 1984); Department of Commerce and Labor, *Bulletin of the Bureau of Labor*, No 54 September, 1904; Stapleford, *Cost of Living in America*.

Much like the Massachusetts branch, most labor bureaus sought to challenge the very legitimacy of wage labor. The Connecticut Bureau of Labor Statistics, before it was taken over by the more conservative Yale economist Arthur Hadley, challenged the very idea of a labor market, noting that “circumstances have given [the employer] power to dictate terms to his workmen.”⁵¹⁷ The New York Bureau made a confession that illustrates just how much Gilded Age laborers were departing from their Jacksonian ancestors’ free-market liberalism. “We have reached a point in our development of governmental conscience,” the Connecticut Bureau admitted, “that laissez faire policy on the basis of every man for himself, is no longer possible.” What is more, the Connecticut bureaus’ second and third reports did not settle for merely collecting statistics on wages but sought out statistics on profits as well.⁵¹⁸

The Ohio Bureau tried to maintain an artisanal system in its rapidly industrializing state by concluding that “without a system of apprenticeship, the status of our mechanics as such will certainly deteriorate.” In its reports, the Ohio bureau fought against “boys doing skilled laborers jobs with furnaces” while also demanding the “creation of cooperative associations for manufacturing and mining purposes.”⁵¹⁹ Just as with the Massachusetts Bureau, the Ohio bureau also discovered that they could not collect the information they desired because employers were not supplying them with the figures they need. As a result, they insisted they receive the power to “administer oaths,” “inspect factories,” and force “every corporation organized under the general incorporation act of

⁵¹⁷ Connecticut Bureau of Labor Statistics, *Annual Report* (1873).

⁵¹⁸ New York Bureau of Labor Statistics, *Fifth Annual Report* (1887): 15.

⁵¹⁹ Ohio Bureau of Labor Statistics, *Annual Report*, 1877, 5.

the state,” to fill out a questionnaire the bureau had designed. “No person,” the bureau noted, “should be allowed to prevent the fulfillment of the evident intent of the law by refusing to give the statistical information asked for.”⁵²⁰

The Illinois Bureau managed to avoid the problem of employers not supplying information because it had strong ties to the Knights of Labor. While other bureaus had to beg capitalists for data, the Illinois Bureau turned to the thousands of Knights of Labor locals distributed across the state, noting how it was the Knights who offered “the best source from which to derive authentic information concerning the classes they represent.”⁵²¹ As a result the statistics supplied by the Illinois Bureau in their 1886 report were very different from the rosy statistics generated by Carroll Wright, who by then had become the commissioner of the federal Bureau of Labor. For example, in referring to the infamous Haymarket affair, the bureau noted how “out of the 17,029 who work only eight hours, 11,316 have acquired the shorter day as a result of the agitation of May, 1886.”⁵²² While Wright had sought to prove that strikes were “unproductive,” the Illinois bureau proved that they effectively improved workers’ lives. The bureau also slammed Wrights conservative estimation that the unemployment rate was 7.5 percent by showing that among Knights of Labor organizations the figure was 19 percent, and this did not even include, the report added, unskilled laborers. The Illinois bureau also made sure to collect figures on the meteoric rise of the Knights of Labor, noting how “during the year and a half

⁵²⁰ Ibid, 10, 14.

⁵²¹ Illinois Bureau of Labor Statistics, *Annual Report* (1886) 168.

⁵²² Ibid, 299.

preceding July 1886, the number of trade-organizations has increased a hundred fold” and 13,000 people had enrolled prior to the May 1st strike.⁵²³

Scholars have largely overlooked the heavy importance the Knights of Labor placed on the collection of economic indicators and the formation of bureaus of labor statistics. In the 1878 Preamble to the Knights Constitution, a document that would spread in pamphlet form across the country, these were the first three points:

I. To bring within the folds of organization every department of productive industry, making knowledge a standpoint for action, and industrial and moral worth, not wealth, the true standard of individual and national greatness.

II. To secure to the toilers a proper share of the wealth that they create; more of the leisure that rightfully belongs to them; more societary advantages; more of the benefits, privileges, and emoluments of the world, all those rights and privileges necessary to make them capable of enjoying, appreciating, defending, and perpetuating the blessings of good government.

III. To arrive at the true condition of the producing masses in their educational, moral, and financial condition, by demanding from the various governments the establishment of bureaus of Labor Statistics.⁵²⁴

Not only were the Knights of Labor pushing for bureaus of labor statistics, but much like the Massachusetts bureau, they were envisioning a statistical system that measured moral, societal and distributive aspects of humanity rather than pricing everyday life by making wealth “the true standard of individual and national greatness.”

Such declarations were not empty words. While Carroll Wright wound up being the federal Commissioner of Labor, Terrence Powderly – the Grand Master himself – had spent much of his time and energy in 1884 seeking to become the first chief of the new federal bureau of labor statistics. It appears the skilled laborers who made up the ranks of the Knights understood the importance of having control of the bureau as well. When

⁵²³ Ibid, 244, 295-8; See also Iowa Bureau of Labor Statistics, *Annual Report* (1884) for a similar worldview.

⁵²⁴ Terrence Powderly, *Thirty Years of Labor* (Columbus, 1890) 243-246.

Powderly applied, in person, to President Chester A. Arthur for the position he presented petitions from 1567 branches of different labor organizations. He also presented clippings from 37 labor papers and 115 daily papers. In response, however, President Arthur handed Powderly a document of his own, one which had been sent to him by a group of manufactures. This is what it read:

It is feared by the employers of labor that if Mr. Powderly is appointed by your excellency he will exert his influence in opposition to the interests of employers. It is also feared that he is in sympathy with the communist element, and that he will be influenced and guided largely by that class.⁵²⁵

While Powderly was far from being a communist, he had been reared by the zero-sum ideology of American patriarchal commercialism. As a result, capitalists had good reason to fear him. In his autobiography, written a few years after he lost the nomination to Wright, Powderly made clear how he would have run the Federal Bureau of Labor had he been made chief. "The legitimate aim of the Labor Bureau," Powderly noted, "is to ascertain beyond the shadow of a doubt what the earnings of labor and capital are in order that justice may be done to both, in order that unscrupulous employers will not have it in their power to rob labor of its just dues and take all the profits of the combination of labor and capital for their own aggrandizement."⁵²⁶ Stressing the importance of open information, Powderly criticized employers for focusing only on the conditions of labor and not the conditions of capital. The employer, he noted, "was disposed to be generous in the matter of stating what was paid to labor; what labor could live on; how much the workman spent for strong drink; what a fondness the workman had for canned goods; and such other

⁵²⁵ Powderly, *Thirty Years of Labor*, 164; See also Craig Phelan, *Grand Master Workman: Terrence Powderly and the Knights of Labor* (Greenwood, 2000), 48.

⁵²⁶ Powderly, *Thirty Years of Labor*, 160

information as could best be given by the workman himself." Clearly criticizing the cost-of-living figures of Carroll Wight, Powderly did not let up, as he slammed the labor bureaus for turning only laborers into the subject of statistical inquiry while the capitalist's "own affairs were not considered proper subjects for public scrutiny, and not being obliged to state what his own profits were, or what he spent for strong drink, he made no mention of such insignificant trifles." Powderly then decried how "the public has a right to know what a corporation earns. It is granted valuable franchises by the public; it lives on the public; it is designed to benefit the public; and to the public it should render an account of its stewardship. The legitimate earnings of capital should become known to the people in order to put a stop to illegitimate profit-taking."⁵²⁷

What is more, a closer look at the statistics that the Knights of Labor did collect demonstrates that the previously masculine, patriarchal ideology of American laborers was becoming more open to issues of women's labor and gender discrimination. The best example of this is the statistical work of Leona Barry. An Irish Immigrant, Barry's husband died in 1881. "'I was left, without knowledge of business, without knowledge of work, without knowledge of what the world was, with three fatherless children looking to me for bread," Barry would later note.⁵²⁸ These miserable conditions likely led to the death of her oldest child. Desperate to find work to keep her other children alive, she got a job at a hosiery mill, where she made eleven cents a day. It was while working at the mill that she joined the Knights of Labor. Apparently, Barry had a knack for labor organizing and within two years she found herself not only the master workman of her own branch but the leader

⁵²⁷ Powderly, *Thirty Years of Labor*, 160.

⁵²⁸ Barry quoted in National Women Suffrage Association, *Report of the Industrial Council of Women* (Washington DC, 1888), 155.

of an entire district assembly of 52 locals. She then was voted to represent her region at the national general assembly in 1886 where she was one of only 16 women among 660 delegates. While at the national assembly, Barry was named the head of the new Woman's Work Department. Her main mission was to traverse the country, collecting statistics on woman's labor that would not only reveal "the abuses to which or sex is subjected by unscrupulous employers" but also the need "of equal pay for equal work."⁵²⁹

By the late 1880s the Knights had an estimated 65,000 female members and Barry had made a name for herself in the statistical reports she had compiled for the annual general assemblies between 1887 and 1889. A striking depiction of the condition of women's labor in America, Barry's reports combined statistical data with a strong moral critique of capitalism. Moreover, just as Powderly had intended, her reports focused not only on labor's wages but on employer's profits, which enabled her to measure the level of exploitation at the American workplace. "The contractor who employed five operatives made 30 cents per unit, or 1.50 a day," she noted in one example, "while each worker received only 30 cents for the entire days work." "Men's vests are contracted out at 10 cents each," she noted in a similar example, "the machine operative receiving 2.5 cents and the finisher 2.5 cents each, making 5 cents a vest for completion."⁵³⁰ Since twenty vests constituted a day's work, Barry calculated, "a contractor who employed five operatives reaped a dollar a day for doing nothing while his victim has 50 cents for eleven and twelve

⁵²⁹ *Knights of Labor Proceedings*, 1886 General Assembly, 952. Barry left no personal papers. See Eleanor Flexner, *Century of Struggle: The Woman's Rights Movement in the United States* (1959); Philip S. Foner, *Women and the American Labor Movement: From the First Trade Unions to the Present* (New York: Free Press, 1979); John B. Andrews and W. D. P. Bliss, *History of Women in Trade Unions*, vol. 10 of *Report on Condition of Woman and Child Wage Earners in the U.S.* (Senate Document 645, 1911).

⁵³⁰ *Proceedings of the Knights of Labor General Assembly*, 1888 report, 9-10.

hours of her life's energies."⁵³¹ By the 1890s, however, Barry was once again forced to return to the factory. With no Terrence Powderly in the federal government, and with the Knights of Labor all but destroyed, there were no statistical institutions through which Barry could make her voice, and those of countless other women, heard.

Conclusions

In his description of Ira Steward in *Beyond Equality*, David Montgomery noted how "Steward, like all his contemporaries in the labor movement, had no conception of the active role for the machinery of the state."⁵³² The shared statistical vision of Ira Steward, George McNeill, Terrence Powderly and Leona Barry demonstrates that Montgomery was wrong. Skilled workers and the Knights of Labor were very much aware that they needed to take over the emerging bureaucracy. The problem is that they failed to do so. The problem was not one of political consciousness, in this instance, but of political power. Counterfactuals are not the usual domain of historians, and rightfully so. Yet the story of the bureaus of labor statistics and the rise of cost-of-living figures in the 1870s and 1880s begs one to ask: What would twentieth century American economic policies and political discourse have looked like if the original founders of the Massachusetts bureau had not been removed from their posts after only four years? If Terrence Powderly had taken the reigns of the Labor Bureau instead of Carroll Wright? If skilled laborer Ira Steward had even half of the political power of skilled capitalist Edward Atkinson?

The fact that the Senate Finance Committee and its 1893 Aldrich Report deemed Carroll Wright's cost-of-living statistics the proper metric with which to measure the

⁵³¹ *Proceedings of the Knights of Labor General Assembly*, 1887 report, 1581-2.

⁵³² Montgomery, *Beyond Equality*, 259.

condition of the American people demonstrates how the visible hand of Edward Atkinson was touching the lives of every American by the 1890s. The political ramifications of the Aldrich Report's figures were enormous. Much like the cost-accounting figures they mimicked, cost-of-living figures presented people as priced inputs of production whose cost was determined not by the amount of value they marginally produced, as the neoclassical myth goes, but rather the amount of money it took to keep them coming to work every day. By focusing only on that which could be priced, moreover, the cost-accounting vision which shaped the Aldrich Report had been emptied of any free labor imperative since it was impossible to place a price tag on proprietary independence, good education, leisure time, mental wellbeing or any of the other demands worker's had that were not strictly pay raises.

American freedom itself came to be defined differently within these figures: In the Aldrich Report the definition of liberty was not self-employment, self-mastery, social mobility or gender and economic equality but rather moderate consumer comfort stemming from increasingly efficient productive processes. Disregarding the heated political arguments which raged throughout the Gilded Age over the proper role of corporations in American life, the Aldrich report made a very clear political argument when it chose to focus solely on cost-of-living: Corporate capitalism was good for Americans because it reduced the price of consumer goods. Legitimizing giant corporations and economics of scale, cost of living statistics cared not if the small, petty, competitive commodity producer was being consolidated into a single massive, managerial corporation. As long as factories were churning out more and more goods at lower and lower prices it did not matter if Americans had gone from bosses to bureaucrats or from skilled artisans to

exploited workers. As long as you earned a “standard of living,” the terms of which the Aldrich Report itself had defined, there were no other burning social issues in America.

Epilogue

Towards GDP and the One Percent

“Climate change will affect the basic elements of life for people around the world,” warned the executive summary of the 700-page Stern Review, a 2006 report widely regarded as the largest and most complete economic analysis of climate change ever undertaken. “Hundreds of millions of people could suffer hunger, water shortages and coastal flooding as the world warms.” Continuing, the report cautioned in the very next paragraph how “if we don’t act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year, now and forever.”⁵³³ For us moderns, the report’s effortless shift from human suffering to GDP probably seems entirely obvious as we have become accustomed to the notion that Gross Domestic Product – a statistic which measures “economic growth” by aggregating the monetary prices of all commodities produced and consumed - is an accurate measure of human progress and prosperity. It is only when one takes a few moments to think about such assumptions that the questions begin to emerge. How and why did GDP become the benchmark for human progress? Why did the Stern Review decide to battle global warming by pricing the future of the planet as if it was a capitalized investment?

By tracing the history of our current economic indicators back to nineteenth century America, this dissertation has sought to answer these two questions. As the Stern Review clearly demonstrates, the importance of these questions cannot be understated: The future of our planet may lie in the balance. Luckily, in the last few years there has been a growing

⁵³³ Sir Nicholas Stern, “Stern Review: The Economics of Climate Change,” Executive Summary, ix, 2012. Accessed April 10th 2013 from http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/stern_review_report.htm.

discourse surrounding the problems of using GDP as the main indicator of social progress.⁵³⁴ Despite their good intentions, however, these narratives rarely historicize the emergence of GDP. As a result, the story often ends up being one in which well-meaning economists and policymakers accidentally or erroneously mistake GDP as an accurate measure of societal wellbeing. In these narratives, the lesson to be learnt usually is not that GDP is a *political* tool that furthers some people's interests over others, or that GDP is a *cultural* mirror that reflects the priorities of our capitalist society, but rather that GDP is simply an empirically inaccurate measure that needs to be tinkered with.

The hegemonic rise of GDP, however, was no accident, error or mistake. As this dissertation has demonstrated, statistics that price everyday life as if it were a capitalized investment became the barometers of human progress in part because of a series of contested social, political, cultural and economic processes that occurred in nineteenth century America. These developments include the ascendance of plantation slavery, corporate bureaucracy, railroad finance, urban real-estate speculation, industrial cost-accounting, a national business press and a Hamiltonian public policy which believed that the goal of the American state was to make the United States a safe and profitable investment for capitalists. The rise of capitalizing indicators was also dependent on the fall of moral statistics and other alternative methods of quantifying American progress, policy and life. As a result, the origins of GDP can also be traced back to the decline of Jeffersonian yeomanry and republicanism, Jacksonian democracy and moral reform, paternalist hierarchy and patriarchal production, and the Knights of Labor and their "free labor" ideology.

⁵³⁴ Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi, *Mismeasuring Our Lives: Why GDP Doesn't Add Up* (New York: New Press, 2010); "The Rise and Fall of G.D.P." *New York Times*, May 13th 2010.

Just as the transformation of America from a producerist, patriarchal-commercial republic into a consumerist, corporate capitalist empire revolutionized all aspects of American life and led to the "rebirth of a nation," so too did this process revolutionize the ways in which Americans measured their prosperity and valued their society.⁵³⁵ Much like the few corporations which came to exert an enormous amount of control on American capital, policy, labor and culture following the great merger movement of the late nineteenth century, these capitalizing indicators focused not on issues of inequality, democracy, proprietary independence, exploitation, morality or poverty but rather on the maximization of market production, market consumption and capital accumulation.⁵³⁶

Statistics are like a cultural mirror: Show me what you count and I will show you what you believe. By the turn of the twentieth century, the United States' government, mainstream press and leading economic thinkers all believed that labor productivity, market growth, consumer spending and capital accumulation should be the benchmarks of American progress and the main objectives of American society. This was not an accident, or a mistake, or a coincidence. The elite, white men who designed these figures – and they were almost entirely elite, white men – had created economic indicators in their own self-image. American progress was being measured in capitalizing statistics by the turn of the twentieth century because American society had become capitalist.

The most famous, widespread and powerful progenitor of these nineteenth century capitalizing statistics, GDP, is therefore an economic indicator that was, quite literally,

⁵³⁵ Jackson Lears, *Rebirth of a Nation: The Making of Modern America, 1877-1920* (New York: HarperCollins, 2009).

⁵³⁶ For a similar take on contemporary notions of progress see Christopher Lasch, *The True and Only Heaven: Progress and its Critics* (New York: Norton, 1991).

tailor-made for a capitalist America. By flaunting those areas in which American capitalism does well, while ignoring those issues in which it is less than sparkling, GDP and other capitalization statistics usually make American capitalism look good. Nothing proves this point better than a chart released by investment bank J.P. Morgan in 2012 (due to copyright issues I cannot include it here) which depicts global GDP rates since the time of Jesus. In this image, 2000 years of human civilization are compressed into a single chart which reveals that nothing of consequence occurred in human history (it looks like a flat line) until around 1800 when Western Europe and the U.S. suddenly ascended like a phoenix from the ashes into an era of glorious growth.

In you are to judge a society solely on GDP, as this chart does, the United States appears as the most successful society in human history. But what if a different indicator were used? What if we were to gauge the United States according to incarceration rates, a measure that - as chapter four of this dissertation revealed - was exceedingly popular in the 1840s? As the chart which follows plainly shows, if we still measured American progress as they did in Jacksonian America, the United States would quickly drop from first to worst.

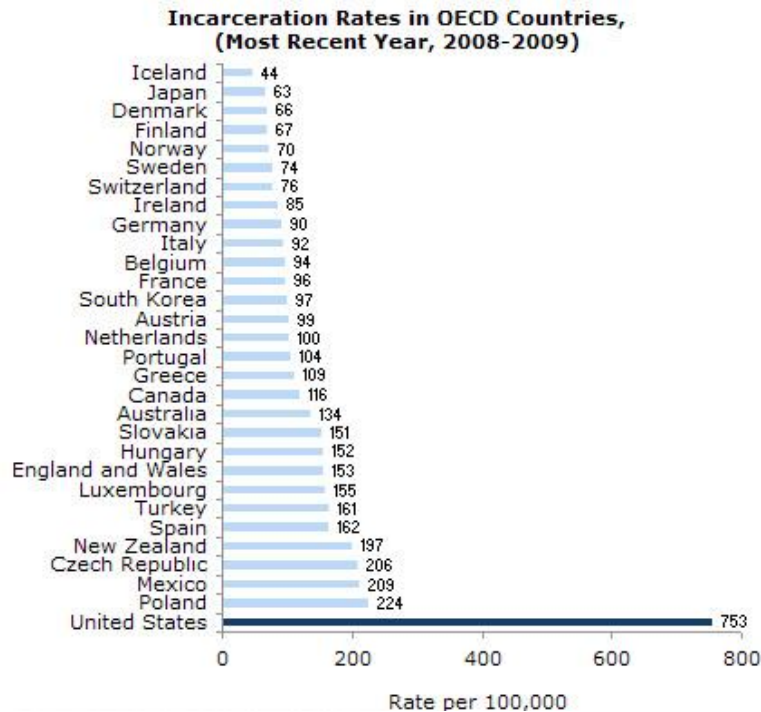


Figure 19: Incarceration rates of OECD countries, 2008-2009. Data taken from International Center for Prison Studies, University of Essex.

Towards GDP

With all this talk of GDP, however, one mustn't forget that Gross Net Product (the precursor to GDP) was only invented in the 1930s by Harvard economist Simon Kuznets at the request of the United States Commerce Department. Since this dissertation ends with the institutionalizing of cost-of-living statistics by the Senate Finance Committee's Aldrich Report in 1893, it clearly does not tell the whole story of the hegemonic rise of GNP and other capitalizing economic indicators. In a brief gesture to the book I intend to write, there are three crucial developments that occurred between the 1890s and the 1930s that should be mentioned here.

First, there is the crucial issue of race. The final chapters of this project will not only explore how Americans in general came to count and be counted in a capitalist manner but also how racialized spatial indicators segregated urban African Americans into a statistical

“black box” were they were often not priced and capitalized, but rather ignored. For example, between 1933 and 1936 the Home Owners’ Loan Corporation - a federal program initiated by President Franklin Roosevelt as part of the New Deal - helped over one million American homeowners in danger of foreclosure refinance their mortgages by offering them government-subsidized loans. In order to decide who would receive these refinanced gifts, the government produced a series of color-coded statistical maps in over 200 cities that assigned residential urban areas a “risk grade.” As historians have shown, African American neighborhoods were disproportionately given the lowest color grade on the map – red. This was redlining, a racial mapping system that would have immense effects on urban space in the post-war era.

One of the keys to understanding the origins of the American post-war “urban crisis” lies in the fact that these redlining maps concluded that large financial institutions could not earn steady capital returns in African American neighborhoods. With racism trumping capital in this instance, few banks or real estate developers bothered to capitalize the labor or purchasing power of the men, women and children who lived in this statistical “black box.” Yet since America was fast becoming a highly capitalist society, in which many social services had to take the form of for-profit enterprise, African Americans’ neighborhoods were often left to rot. While white Americans were being priced as sources of potential productivity and consumption through indicators such as GNP and consumer confidence, redlining reveals that urban African Americans were often being statistically erased or segregated. The rather disturbing conclusion I may reach in these final chapters is that the worst thing that can happen to a person or a community in a capitalist society is *not* to be priced and capitalized like a financial investment.

Second, there is the institutional and intellectual history of how GNP came into being in 1935 which will require a closer look at the history of economic thought and the discipline of economics in the early twentieth century as well as an analysis of the enormous expansion of state capacity in the Progressive and New Deal era. Examining G.N.P, business cycle statistics, the consumer price index, and other economic indicators, I intend to explore institutions such as the National Bureau of Economic Research, the *Wall Street Journal*, Herbert Hoover's Commerce department and the Federal Reserve as well as economic thinkers such as Irving Fisher, Wesley Mitchell and Simon Kuznets. Seeking to insure continued economic growth, consumer spending, and a corporate-friendly, anti-inflationary monetary policy, I plan to show how these economic indicators played a central role in maintaining and stabilizing a New Deal order of steady corporate profits, bread-and-butter unionism and mass consumption.

Finally, I intend for there to be a final chapter which is global in scope that will focus on the role that economic indicators have played in early twentieth century American foreign policy. Looking at how American corporations and policymakers used economic statistics to control, discipline or indirectly influence the economic and social policies of countries such as Cuba and the Philippines, I hope to demonstrate how the United States government began pricing and capitalizing not only American citizens but the men and women of the Global South as well. I believe this early twentieth century statistical imperialism served as the foundation for later attempts, by the World Bank for instance, to export and institutionalize the American system of capitalist quantification across the globe by conditioning the receipt of loans on the performance of certain macroeconomic indicators such as GNP.

The Rise of Capitalism and the One Percent

Yet while the book will bring the narrative roughly up to the invention of GNP in the mid-1930s, the mid-1890s still seem like a fitting place to end this dissertation. I say this for two main reasons.

Firstly, the defeat of the Knights of Labor and the labor organizers who controlled numerous state bureaus of labor statistics in the 1880s marks the final moment in American history in which an alternative statistical vision to that of capitalizing indicators was effectively being canonized and institutionalized by the American government, leading economic thinkers and the mainstream press. From here on out, the story of economic indicators – like the story of economic discourse in America in general – is far narrower and one-sided. Yes, there are enormously crucial differences between economic conservatism and economic liberalism, Keynes and Hayek, or the 1930s and the 1970s. But by the turn of the twentieth century, both conservative and progressive economic indicators would be grounded in a similar corporate-capitalist worldview that aimed for maximum market production and consumption above all else. While heated debates existed and still exist over such issues as the role of government in the marketplace, few economists, policymakers or even everyday Americans in the twentieth century have argued over what the overarching goal of public policy should be. From stimulus-loving Keynesians to neoliberal free marketeers, nearly all non-marginalized Americans, be they laymen or pundits, are largely in agreement that the government's main mission should be the maximization of economic growth.

Secondly, the turn of the twentieth century is a fitting moment to end this dissertation because, as the final chapter of this dissertation only partially demonstrates,

by the late 1890s many – all though certainly not all - of the key institutional, cultural and economic developments which led to the hegemonic rise of capitalizing economic indicators were already in place:

- Around 1900 or so, a professionalized class of neoclassical economists, led by the likes of John Bates Clark and Irving Fisher, began taking over political economy departments. These men would quickly transform political economy into "economics" - a highly quantitative and a-historical endeavor which skirted distributive and political issues by focusing mostly on the allocation of resources and inputs (including people of course) that maximized market production and consumption.⁵³⁷
- Around 1900 or so, technocratic, depoliticized and "expert"-led government bureaucracies began to take control of statistic-generating institutions such as the census. (The census only became a permanent bureau in 1903. Beforehand, its work plan had been mostly determined by elected legislators in Congress, not experts or bureaucrats.)⁵³⁸
- Around 1900 or so, with the fall of the Populists, the American people no longer decided the fate of their money or banking system in electoral politics or public debates as monetary policy came to be determined by the public-private hybrid known as the Federal Reserve.⁵³⁹

⁵³⁷ See Cohen, *The Reconstruction of American Liberalism*; Sklansky, *The Soul's Economy*; Lustig, *Corporate Liberalism*. Michael Bernstein, *A Perilous Progress: Economists and Public Purpose in Twentieth-Century America* (Princeton: Princeton University Press, 2004).

⁵³⁸ On the professionalization of the census see Andersen, *American Census*. For the rise of expert bureaucracies and a depoliticized regulatory state see Cohen, *Reconstruction of American Liberalism*; Skowronek, *Building a New American State*; Weibe, *Search for Order*.

⁵³⁹ On the Federal Reserve see James Livingston, *Origins of the Federal Reserve System: Money, Class and Corporate Capitalism 1890-1913* (Ithaca: Cornell University Press, 1990). On the populists and the politics of money see also Bruce G Carruthers., and Sarah Babb. "The color of money and the nature of value: Greenbacks

- Around 1900 or so, the “great merger movement” crushed any lingering patriarchal-commercial hopes that American society would be a nation of petty producers, small businesses and proprietary individualism.⁵⁴⁰ (Not coincidentally, it was in the 1890s that two men, Dow and Jones, not only founded the *Wall Street Journal* but also invented a statistical index which measured economic progress by calculating the capitalized value of the biggest publically-traded corporations.)⁵⁴¹
- Around 1900 or so, the fall of the Knights of Labor and the rise of the AFL insured that labor conflicts would no longer focus on such issues as corporate profits, gender inequality, a permanent wage laboring class, leisure time, social mobility or control of the workplace but would rather more narrowly on “bread-and-butter issues” such as higher wages or cost of living. As this shift from the Knights of Labor to the AFL exemplifies, the producerist politics and values of the nineteenth century had been replaced by the corporate-friendly, consumerist politics and values of the twentieth century.⁵⁴²
- Around 1900 or so, corporate processes of mechanized mass-production radically altered the American bourgeoisie’s biggest obstacle to continuous and stable capital accumulation. In the second half of the nineteenth century, the main challenge for American capital was the fear of “ruinous competition” both abroad (hence the tariff)

and gold in postbellum America," *American Journal of Sociology* (1996): 1556-1591; Roy Kreitner, "Money in the 1890s: The Circulation of Politics, Economics, and Law." *UC IRVINE L. REV.* 1 (2011): 975-989.

⁵⁴⁰ On the merger movement see Naomi Lamoreux, *The Great Merger Movement in American Business, 1895-1904* (New York: Cambridge University Press, 1985).

⁵⁴¹ On Dow, Jones and the Wall Street Journal see Lloyd Wendt, *The Wall Street Journal: The Story of Dow Jones and the Nation's Business Newspaper* (Chicago: Rand McNally, 1982).

⁵⁴² See Lawrence Glickman, *A Living Wage: American Workers and the Making of Consumer Society* (Ithaca: Cornell University Press, 1997).

and at home (hence the desire to merge into giant monopolistic corporations.)⁵⁴³ With the rise of the giant corporation around 1900 or so, this problem became obsolete and a new central challenge emerged: finding enough consumers to purchase the never ending flow of commodities being mass-produced by American corporations.⁵⁴⁴

- Finally, and in relation to the previous point, around 1900 or so American leaders began to see (and quantify) other nations as potential markets for their endless array of products. It is no coincidence, therefore, that the first American census taken outside the continental United States was taken in Hawaii in 1896, followed by Cuba in 1899 and the Philippines in 1904.⁵⁴⁵

These economic, political and social developments all played a crucial role in the cultural and institutional canonization of capitalization statistics. After 1900 or so, to conclude, it was almost unimaginable for leading American policymakers, economists or bureaucrats to argue that popular nineteenth century indicators such as incarceration rates, prostitution percentages, poverty figures, proprietary independence or wealth inequality should serve as benchmarks of American prosperity. While critical developments leading up to the invention of GNP still had not taken place, it would not be

⁵⁴³ For the problem of “ruinous competition” see Chandler, *Visible Hand*; Kolko, *Triumph of Conservatism*; Weinstein, *Corporate Ideal in the Liberal State*. For the tariff see Richard Bense, *Yankee Leviathan: The Origins of Central State Authority in America, 1859-1877* (New York: Cambridge University Press, 1990).

⁵⁴⁴ On the need for consumer markets see Livingston, *Federal Reserve*; Jackson Lears, *Fables of Abundance: A Cultural History of Advertising in America* (New York: Basic Books, 1994); Chandler, *Visible Hand*.

⁵⁴⁵ Hawaii General Superintendent of the Census, *Report of the General Superintendent of the Census*. (Honolulu: Hawaiian Star Press, 1896); United States War Department Cuban Census Office, *Report on the Census of Cuba, 1899* (Washington, 1900); Census United States Bureau of the Census, *Census of the Phillipine Islands* (Washington, 1904); For the linkage between imperialism and consumer markets see William Appleman Williams, *The Tragedy of American Diplomacy* (Cleveland: World Pub., 1959).

an exaggeration to say that by 1900 or so the capitalist dye had been cast on mainstream America's statistical imagination.

The forgotten story of Dr. Charles Spahr illustrates this final point. Close friends with the muckraking, anti-corporate activist Henry Demarest Lloyd, Spahr was an editor, writer and economic thinker living in New York City. In the early 1880s, when the political battles over the political nature of political economy departments had not yet played out, Spahr received a PhD at Columbia University. Thanks to business-friendly, neoclassical Columbia economists such as John Bates Clark and Richard Mayo-Smith, however, by the 1890s Spahr's leftist leanings made it impossible for him to receive a professorship at Columbia.⁵⁴⁶ Turning to newspapers editing, Spahr still managed to publish his research in 1896. The title of his book was *An Essay on the Present Distribution of Wealth in the United States*. It was part of a series published and edited by institutional economist Richard Ely, who only two years before was put on trial at the University of Wisconsin for suspicions that he was a socialist.⁵⁴⁷ In his book, Spahr meticulously mined pages upon pages of wealth statistics in order to prove one point: As time passed, the distribution of wealth in the United States was becoming more and more unequal. "Seven-eighths of the families [in America] hold but one-eighth of the national wealth," Spahr concluded, "while one per cent of the families hold more than the remaining ninety-nine."⁵⁴⁸ Over a century before the Occupy movement, Spahr had discovered the "one percent."

⁵⁴⁶ On the politics of the political economy departments in the late nineteenth century see Cohen, *Reconstruction of American Liberalism*. Spahr taught for a few years at Columbia as an adjunct but was then let go.

⁵⁴⁷ On Ely's trial see Theron Schlabach, "An Aristocrat on Trial: The Case of Richard T. Ely," *Wisconsin Magazine of History*, 47 (1964): 146-159.

⁵⁴⁸ Charles Spahr, *An Essay on the Present Distribution of Wealth in the United States* (Boston, 1896) 69.

As this dissertation has persistently documented, the issue of wealth inequality was very dear to the hearts of most Americans in the nineteenth century since their republican beliefs led them to see inequality as one of the greatest threats to a functioning democracy. If Spahr's findings had been published in the 1840s, 1860s or even 1880s, it likely would have led to a massive public uproar against the "one per cent." By 1896, however, this was no longer the case. While a few marginalized socialists would go on to cite Spahr's book in the first decade of the twentieth century, his statistics were almost entirely ignored at the time of their publication and have been largely discarded ever since. Spahr never got a job as a professor and his economic writings fell into complete obscurity. Today, Spahr's life remains shrouded in mystery as he does not even appear in any of the "Who's Who" biographies of the twentieth century past 1909, has no obituary which tells his life's story, and has never been written about by any historian.

A glance at the scathing review of Spahr's book published in the leading academic journal of the era partially explains his historical obscurity. The review was written by Columbia Professor of Political Economy Richard Mayo-Smith, a wealthy man who had written his own book on economic statistics in 1888 that was filled with cost-of-living figures, economic growth metrics and many other capitalizing statistical indicators which calculated the overall wealth of America in 1880 at \$43 billion (yet of course did not detail how such wealth was divided up amongst the American people.)⁵⁴⁹ Mayo-Smith opened his extremely harsh review of Spahr's book by questioning his calculations. Realizing perhaps that such a view might tarnish the reputation of all statistical indicators, however, Mayo-

⁵⁴⁹ Richmond Mayo-Smith, *Statistics and Economics* (Baltimore, 1888). According to a New York Times article on his mysterious death, Mayo-Smith lived in an a large estate on the upper east side and had a butler. "Columbia Professor Killed by Fall," *New York Times*, November 12, 1901.

Smith quickly shifted his argument to the question of wealth distribution statistics in general. "Having shown that property and incomes are unequally distributed and that (in his opinion) the inequality is increasing," Mayo-Smith contends, "Dr. Spahr seems to think that his task is ended. But that is only the beginning. The real question is whether such a concentration of wealth is not a good thing for the whole community." Mayo-Smith then goes on to suggest that British economist Sir Robert Giffen's cost-of-living and consumer spending statistics serve as a far better benchmark of social progress than wealth distribution figures, noting that "the happiness of individuals is measured not according to their ownership of property...but according to their command of the enjoyments of life."⁵⁵⁰ Perfectly articulating the revolutionary shift from proprietary patriarchal-commercialism to consumerist corporate-capitalism, I cannot think of a better statement with which to end this dissertation.

⁵⁵⁰ Richmond Mayo Smith, "Review," *Political Science Quarterly*, 12 (1897): 346-8.

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